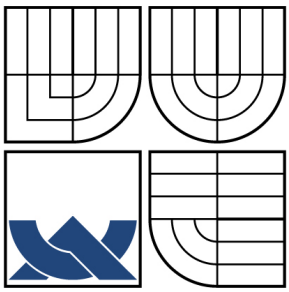
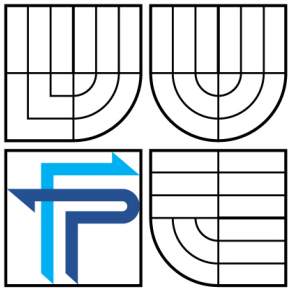


VYSOKÉ UČENÍ TECHNICKÉ V BRNĚ

BRNO UNIVERSITY OF TECHNOLOGY



FAKULTA PODNIKATELSKÁ
ÚSTAV EKONOMIKY

FACULTY OF BUSINESS AND MANAGEMENT
INSTITUTE OF ECONOMICS

EVALUATION OF THE FINANCIAL SITUATION IN THE FIRM AND PROPOSALS TO ITS IMPROVEMENT

HODNOCENÍ FINANČNÍ SITUACE PODNIKU A NÁVRHY NA JEJÍ ZLEPŠENÍ

DIPLOMOVÁ PRÁCE
MASTER'S THESIS

AUTOR PRÁCE — Bc. HANA HRADÍLKOVÁ
AUTHOR

VEDOUCÍ PRÁCE — doc. Ing. JAN SOLAŘ, CSc.
SUPERVISOR

BRNO 2009

Brno University of Technology
Faculty of Business and Management

Academic year: 2008/2009
Institute of Economics

MASTER'S THESIS ASSIGNMENT

Hradílková Hana, Bc.

European Business and Finance (6208T150)

Pursuant to Act. No. 111/1998 Coll., on Higher Education Institutions, and in accordance with the Rules for Studies and Examinations of the Brno University of Technology an Dean's Directive on Realization of Bachelor and Master Degree Programs, the director of the Institute of is submitting you a master's thesis of the following title:

Evaluation of the Financial Situation in the Firm and Proposals to its Improvement

In the Czech language:

Hodnocení finanční situace podniku a návrhy na její zlepšení

Instructions:

Introduction
Definition of Problem and Aims of Thesis
Theoretical Base of Thesis
Analysis of Problem and Current Situation
Proposed Solution, Contribution of Proposed Solution
Conclusion
References
Appendices

Literature / Sources:

ALEXANDER, C. Market models: a guide to financial data analysis. Chichester: John Wiley & Sons, 2001. 494 s. ISBN 0-471-89975-5.
BERNSTEIN, L. A. Analysis of financial statements. New York: McGraw-Hill, 2000. 784 s. ISBN 0-07-094504-7.
FRIDSON, M. Financial statement analysis: a practitioner's guide. New York: John Wiley & Sons, 2002. 396 s. ISBN 0-471-40915-4.
WHITE, G. I. The analysis and use of financial statements. Hoboken: John Wiley & Sons, 2003. 767 s. ISBN 0-471-37594-2.

The supervisor of master's thesis: doc. Ing. Jan Solař, CSc.

Submission deadline master's thesis is given by the Schedule of the Academic year 2008/2009.

L.S.

Ing. Martin Slezák	doc. RNDr. Anna Putnová, Ph.D., MBA
Director of the Institute	Dean of the Faculty

Brno, 24.08.2009

Annotation

The master's thesis evaluates the financial situation of the company VODNÍ DÍLA-TBD Inc. with use of selected methods of financial analysis during the period 2004-2008. The thesis proposes possible solutions and measures to improve the financial situation of this company in coming years.

Anotace

Tato diplomová práce hodnotí finanční situaci společnosti VODNÍ DÍLA-TBD a.s. s využitím vybraných metod finanční analýzy v období let 2004-2008. Práce navrhuje možná řešení a opatření vedoucích ke zlepšení finanční situace této společnosti v následujících letech.

Key words

Financial analysis, financial ratios, profitability, liquidity, activity, insolvency

Klíčová slova

Finanční analýza, finanční ukazatele, rentabilita, likvidita, aktivita, zadluženost

Bibliographic Citation

HRADÍLKOVÁ, H. *Hodnocení finanční situace podniku a návrhy na její zlepšení*. Brno: Vysoké učení technické v Brně, Fakulta podnikatelská, 2009. 80 s. Vedoucí diplomové práce doc. Ing. Jan Solař, CSc.

Declaration

I hereby declare that this master's thesis has been written by myself without any external unauthorised help, that it has been neither presented to any institution for evaluation nor previously published in its entirety or in parts. All used information sources are properly cited including complete reference to the original work.

Brno, 22nd August 2009 ……..

Signature

Acknowledgement

First of all I would like to thank my supervising tutor doc. Ing. Jan Solař, CSc. and Ing. Ondřej Žižlavský for their abundant help and their prolific suggestions. I also thank Ing. Jiří Hodák, a manager of department in Brno of the company VODNÍ DÍLA-TBD Inc., for giving valuable information, consultations and for his obliging approach.

CONTENT

INTRODUCTION

The financial crisis is a recent theme that influences life of individuals, companies and countries as well. Specialists and investors are interested in reasons of the financial crisis and its development and impacts in next years. At this time, it is necessary to monitor development of enterprises and economy as a whole.

According to CTK (Czech News Agency) the worst is most likely over for the Czech economy and the fall in GDP or in industrial production should already be slower than at the beginning of the year. On the other hand, a significant improvement can hardly be expected in case of unemployment, which will keep growing. The stability and the quality of home economy decide how big losses it suffers. (17)

Every economical subject who wants to be successful on the market has to continuously analyse its activity and reached results. Every decision in the company has to be adapted to changes in the way, that company can maintain or increase status on the market and can be able to compete. It is necessary to optimise the volume of production, inventory, structure of financing and personnel according to changes in market environment. The basic aim of every company is long time maximization of company's market value.

Finances are important part of every enterprise. To monitor a development of management results, financial stability, profitability and liquidity are used for financial analyses of situation. The analysis gives an overview of financial and property situation of company, its causes and gives impulses for financial management and decision-making.

The content of my master's thesis is to carry out an analysis of financial management of a selected company. This means a complex examination of current financial and economical situation of the company, which is VODNÍ DÍLA-TBD a. s. (VD-TBD a.s.) in this case.

The thesis is divided into several thematic parts. In the first part there are the problems defined and stated the aims of thesis and information about the analysed company. This includes introduction of the company, its focus, history, activities and organizational structure. SWOT analysis and Porter's analysis of the company are done as well.

The second part contains theoretical base from literature. Theory describes a financial analysis, its relevance and methods. Probably the most widely used financial analysis technique is ratio analysis, the analysis of relationships between two or more line items on the financial statement. For a purpose of the thesis are used absolute, proportion, and differential ratios. Vertical and horizontal analyses show comparison of analysed data with data from previous accounting year. The cash flow analysis is an important tool for managing liquidity. Systems of ratios are calculated to determine a financial health and trustworthiness of the company.

The third part of the thesis is focused on analysis of the problem and current situation with help of calculation of selected financial analysis ratios during the period 2004 – 2008. The summary of financial analysis and proposed solution and its contribution are contained in the fourth part.

1 DEFINITION OF PROBLEM AND AIMS OF THESIS

The first chapter is focused on a definition of primary and secondary aims of the thesis. There is an introduction of the company where is the financial analysis done. It describes basic facts about company, its history, activities and organizational structure, the book value of equity and composition of shareholders. With help of SWOT analysis are shown company's strengths, weaknesses, opportunities and threads. Porter's five analysis deals with company's environment and industry the company belongs to.

1.1 Introduction of the Company

VODNÍ DÍLA-TBD a. s. (Dam Safety Surveillance and Supervision) is an engineering and consulting company, which provides technical and safety supervision over waterworks in the Czech Republic.

Trade Name:	VODNÍ DÍLA-TBD a. s.
Place of Business:	Praha 1, Hybernská 40, postcode 110 00
Registration Number:	492 41 648
Entry Date:	6th October 1993
Legal Form:	Incorporated
Subject of Enterprise:	Technical and safety supervision, see further
Equity Capital:	10,600,000 CZK
Principal Shareholders:	Mainly recent and former employees

Figure 1 The Logo of the Company
Source: Company's in-house material

The company monitors and evaluates the technical conditions of waterworks, emphasizing safety and reliability, and eliminates possible failures and their consequences. Its activity also helps to anticipate all kinds of failures, which results to avoiding the economical losses on the waterworks itself and in the downstream area as well. The main goal is to prevent and mitigate risks resulting from possible dam failures.

1.1.1 History

The incorporated company VD-TBD a. s. was founded in 1993 by privatisation of a state enterprise Vodohospodářský rozvoj a výstavba (Water Development and Works). The Central water authority to do dam safety surveillance and supervision after winning public competition entrusted the company in 1994. The Ministry of Agriculture authorised the company to do dam safety supervision for all categories and to make references for waterworks categorization.

1.1.2 Activities

VODNÍ DÍLA-TBD a. s. offers complex services to all waterworks owners and watershed managers of all kinds of waterworks including:

- Dams
- Weirs
- Small Dams and Ponds
- Dikes and Polders
- Hydraulic Tunnels
- Lock Chambers, Hydropower Plants
- Tailings Dams, etc.

Figure 2 Brno Dam
Source: www.foto.mapy.cz

The company is officially authorized by local authorities to provide all these services. The focus is on:

- Technical and safety supervision
- Inspections, surveillance and observation
- Expert and exact measurement
- Categorisation of waterworks
- Documentation of waterworks
- Flood prevention
- Geodetic measurement and mapping
- Research and development
- Organization of seminars and workshops on waterworks safety

Figure 3 Employees in Action
Source: Company's in-house material

The Composition of Yields

The yields in 2008 were mainly composed from engineering activity (89%), from lease and advertisement (8%), and the other (3%).

The highest volume of contracts in 2008 was made from engineering and consulting activities in conformity with the main purpose of the company in the field of dam safety

and technical and safety supervision. The company carried on technical and safety supervision for 279 waterworks in 2008.

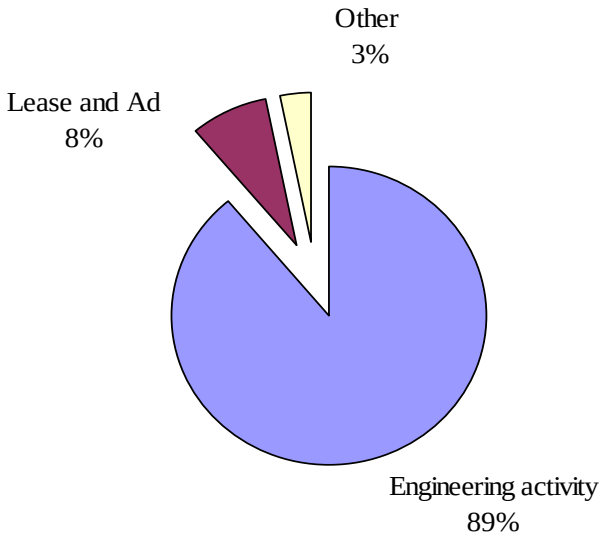


Figure 4 The Composition of Yields
Source: Company's in-house material

The Book Value of Equity

The company's book value equity was 2,650,000 CZK at the moment of foundation of the company. It was composed by investments of founders – shareholders of the company. The book value of equity was increased to 5,300,000 CZK in 1999 on base of general assembly decision from owners' sources. The next increase was in 2004 to 10,600,000 CZK from owners' sources again. The last increase approved by general assembly to 21,200,000 CZK was realized in the summer of this year (2009).

Shareholders

The company was founded in 1993 by 66 shareholders who held 265 shares with nominal value of 10,000 CZK. In 2009 is the general meeting represented by 69 shareholders who hold 265 shares with nominal value of 80,000 CZK. The composition of shareholders is following: 33 shareholders are employees of the company and they hold 160 shares (60.4%), the rest 36 external shareholders, including former and retired employees holding 105 shares (39.6%).

1.1.3 Organizational Structure

VD-TBD a. s. is the independent private company owned by Czech physical entities. The main place of the company with its four departments: masonry and concrete dams; earth dams and tailing dams; ponds and small dams; and economy and administration department, is situated in Praha and the department for Moravian and Silesian waterworks in Brno.

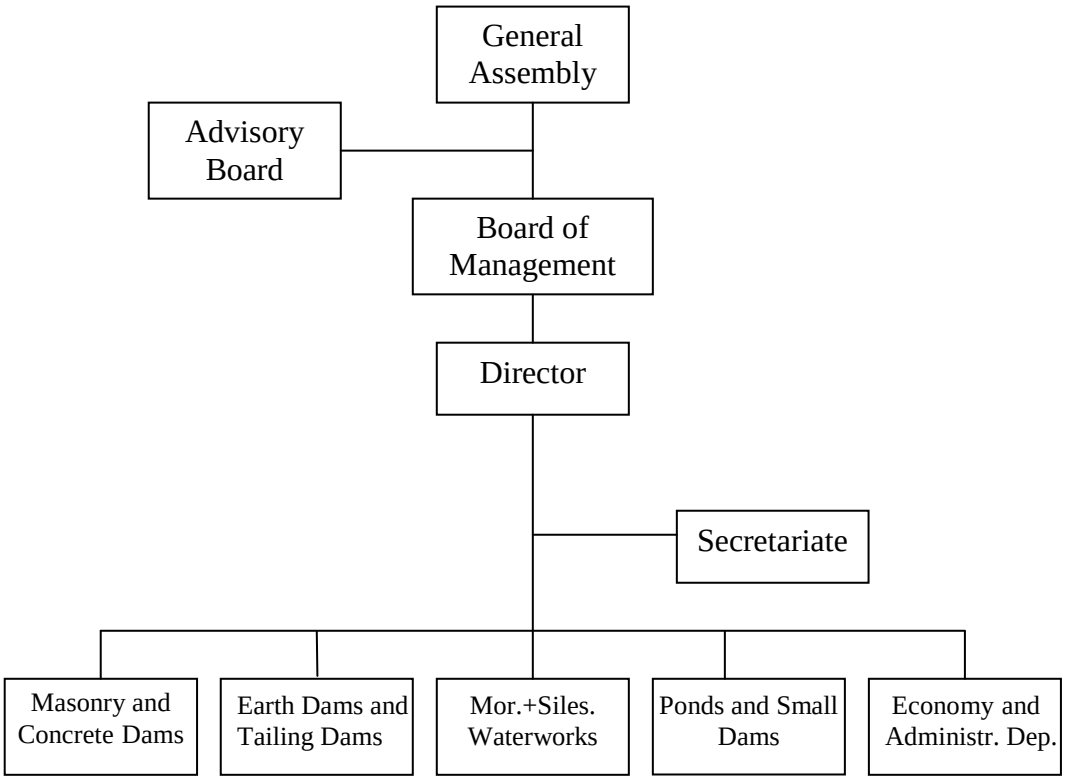


Figure 5 Company's Organisational Structure
Source: Company's in-house material

Employees

The company employs about 50 experts in the field of water agriculture and environment. Most of them are university educated. From the qualifying and organizational point, the number of employees settled down to optimal value. The low fluctuation of employees is evaluated positively especially because of high expertness and experience of employees.

The following graph shows average figure of employees during the last 15 years.

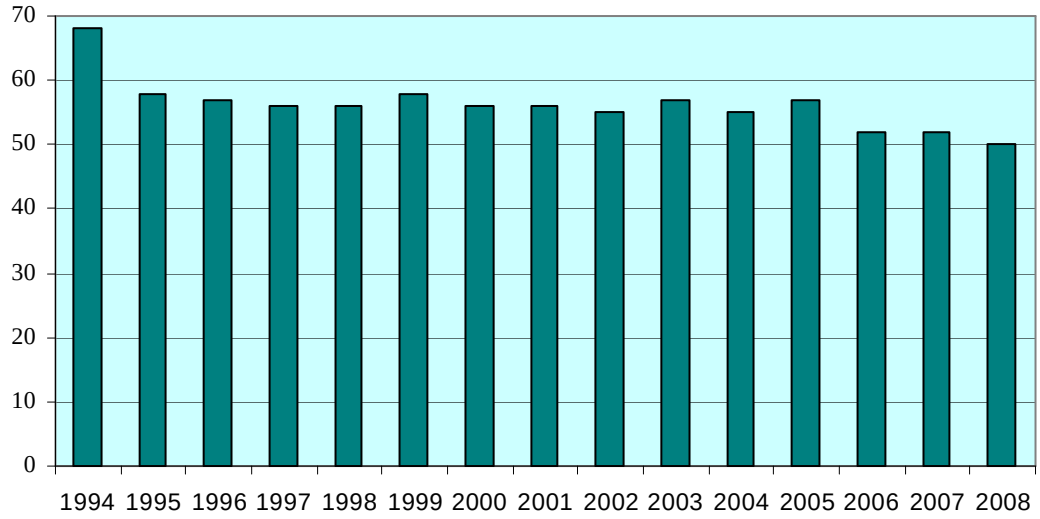


Figure 6 Average Number of Employees
Source: Company's in-house material

1.1.4 Porter's Five Forces Analysis

Porter identified five competitive forces that shape every single industry and market. These forces help to analyze everything from the intensity of competition to the profitability and attractiveness of an industry.(8)

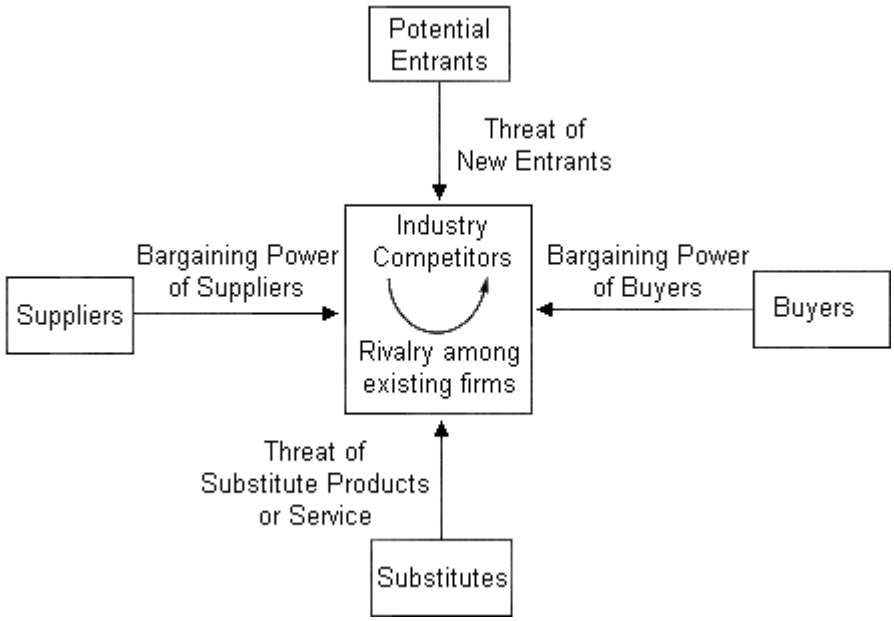


Figure 7 Porter's 5 Forces – Elements of Industry Structure
Source: Porter, 1985, p. 6

VD-TBD a. s. is the independent private company owned by Czech physical entities. It has no connection to production, operation nor supplier enterprises.

Threat of New Entrants

- Authorization by Ministry of Agriculture of the Czech Republic
- High specialization requirements
- Exclusive contracts

Rivalry among Existing Firms

- None, the only one company with authorization for technical and safety supervision and categorization of water works
- Only at the level of the other activities

Threat of Substitute Products or Service

- Irreplaceable, no substitutes

Bargaining Power of Buyers

- Owners of waterworks – no bargaining power, duty of technical and safety supervision is given by Water Act
- Only at the level of other activities

Bargaining Power of Suppliers

- No connection to suppliers

1.1.5 SWOT Analysis

A swot analysis is used to highlight and identify company's strengths, weaknesses, opportunities and threats. It brings together the results of the analysis of the firm (internal), the environmental analysis (external).

The aim is to match the optimum firm's resources with the environment in order to gain sustainable competitive advantage. It is possible by building on a firm's strengths, reducing weaknesses, exploiting opportunities or countering threats.

It is important to look at strengths and weaknesses in the context of opportunities and threats. Strengths matter only if you can use them to exploit an opportunity or counter a threat.

Similarly, a weakness is problematic if it relates to a threat. Thus an external factor can be an opportunity or a threat. A firm must use resources to acquire the strengths that are necessary to exploit the opportunity. (4)

Strengths

- Exclusive contracts
- Authorization by Ministry of Agriculture
- The duty of technical and safety supervision is given by Water Act
- Specialization of the company
- Expertness and experience of employees
- Loyalty of employees
- Member of ICOLD (International Committee on Large Dams)

Weaknesses

- Needfulness of the authorization by Ministry of Agriculture
- Needfulness of expertness employees
- Prices of contracts
- Outdated way of employees´ thinking

Opportunities

- Arrange contracts for higher price
- Extended education of employees (foreign languages, higher qualification)
- Gaining contracts from foreign countries
- Prepare for case of losing authorization (other possibilities of working in the field of water structures)

Threats

- Losing of specialists
- Possibility of loss of the authorization by Ministry of Agriculture
- Possibility that the authorization by Ministry of Agriculture will be given to another company as well
- Possibility of Water Act change in the meaning of technical and safety supervision

1.1.6 Analyses Results

VODNÍ DÍLA–TBD a. s. is the unique independent private company. To exercise its activities of technical and safety supervision, the company is highly specialized and has the authorization by Ministry of Agriculture. This authorization is the main strength of the company, it creates a big barrier for new entrants, on the other hand, the possibility of its loss is the main threat. How to deal with loss of the authorization can be seen as an opportunity to find other possibilities of working in the field of water structures.

Due to the authorisation, there is no rivalry, no competitors at the level of dam safety. The services are so unique that they are not irreplaceable and have no substitutes. The company has no connection to production, operation nor suppliers companies. Buyers, the owners or operators, have no bargaining power, because they have duty to perform technical and safety supervision by Water Act.

1.2 Aims of Thesis

The primary aim of the thesis is:

- To evaluate a financial situation of company VODNÍ DÍLA–TBD a. s. and propose measures for improving the situation

The secondary aims are following:

- To introduce the company VODNÍ DÍLA–TBD a. s.
- To do a SWOT and Porter's five analysis of the company
- To do an literature overview of given problematic
- To apply gained theoretical knowledge to concrete enterprise
- To do the financial analysis of current situation
- To do a vertical analysis and horizontal analysis
- To calculate proportion and differential ratios
- To do cash flow analysis
- To calculate Altman Z-Score, Index IN05, Quick test

Financial statement analysis is a judgment process. One of the primary objectives is to identify major changes in trends, their relationships and what is the most important, why this changes happened.

2 THEORETICAL BASE OF THESIS

The second chapter is focused on the theoretical base of the thesis. There is an introduction of financial analysis, description of methods that are consequently used in the chapter three and description of sources and users of financial analysis. The main part is dedicated to the chosen financial ratios.

2.1 Financial Analysis

Generally there are two basic approaches to financial analysis. The first one is **fundamental analysis**, where analyses are done on base of wide knowledge of mutual connection between economic and non-economic phenomena and on base of experience of specialist and their estimation, and on base of trends.

The second type is called **technical analysis**, which uses mathematic, statistic, econometric and other algorithm methods to work with economic data and assess results. Both of methods are mutually complement to each other.

The following text considers the technical analysis, which is a necessary tool for financial management of companies in the field of market economies.

The process of financial analysis contains:

- Collection of entry data needed for analysis
- Choose of right analysis methods in connection to its aim
- Elaboration of analysis
- Calculation of indicators
- Comparison with branch's averages
- Time trend analysis
- Analysis of relation among indicators
- Interpretation of results
- Suggestion of measures for financial planning and management (16)

The main aim of financial analysis is to find financial health of company and forestall weak sides of financial management of company, which could lead to the problems in the future. Besides the weak sides it is necessary to specify the strong sides that company can use as a base of its business in the future. Financial analysis serves as a background for budget control, calculation, etc. (15)

Financial analysis is used mainly for:

1) Economic decision and assessment of a level of company's management; and value and creditworthiness of creditor
2) Financial assessment of situation, it means to assess financial efficiency (profitability and activity); financial position (liquidity, solvency, insolvency, financial stability)

2.1.1 Methods of Financial Analysis

There are a lot of methods used in financial analysis. From the point of complexity and deep of analysis the division is following:

- Fundamental technical analysis methods
- Higher financial analysis methods

For purposes of thesis are more closely described only fundamental methods which are mentioned in next chapters in more detail.

Fundamental Methods

Fundamental methods of financial analysis use basic arithmetic operation with indicators. The main advantages are simplicity, speed, and unpretentiousness to calculate.

Fundamental methods of financial analysis are divided into following categories and subcategorises:

- Absolute ratios analysis
- Proportion ratios analysis
- Differential ratios analysis
- Cash flow analysis
- System of ratios analysis (12)

Higher Methods

Higher methods of financial analysis are based on more complicated mathematic procedures and cogitation. The division is following:

1. **Mathematic-statistic methods**
    - Punctual estimation
    - Statistic tests
    - Empiric distribution function
    - Colleration coefficients
    - Regression simulation

2. **Non-statistic methods**
    - Expert systems
    - Fuzzy sets
    - Methods based on uncertain data theory (12)

2.1.2 Sources of Financial Analysis

The main source to set financial analysis are basic financial statements. The balance sheet, the income statement and the cash flow statement contain basic information about analysed company and its activities, they record move of company's finances in every form and phase of company's activity. It is necessary that statement truly reflects the real situation of the company.

The Balance Sheet

The balance sheet, prepared on the specific date, records the categories and amounts of assets employed by the company and the offsetting liabilities incurred to lenders and owners. The recorded value of the total assets invested in the business at any point in time must be matched precisely with the recorded liabilities and owners' equity supporting these assets.

The Income Statement

The income statement reflects the effect of management's operating decision on business performance and the resulting accounting profit or loss for the owners of the company over a specified period of time. The profit or loss calculated in the statement

increases or decreases owner's equity. The income statement displays the revenues recognized for a specific period, and the costs and expenses charged against these revenues.

The Cash Flow Statement

The cash flow statement is the statement that captures both the current operating results and the accompanying changes in the balance sheet. It gives a dynamic picture of the changes in cash which resulting from the decisions made during a given period. The user can judge the magnitude and relationships of these cash movements. (6)

2.1.3 Users of Financial Analysis

Information considering financial health of company and its management are object of interest for many subjects that are in connection with the company.

Figure 8 is an overall summary of the users of statement analysis, their primary goals, and the underlying objectives they are seeking to accomplish in order to meet those goals.

User of Financial Statement Analysis	**Primary Goal**	**Objectives**
Equity investors	Valuation	Profitability Risk analysis Growth analysis
Creditors	Ability to repay debt	Liquidity Solvency
Management	Efficiency	Profitability Solvency Operating performance

Figure 8 Users of Financial Statements Analysis
Source: Tempte, p. 75

There is another group of users who wants to know about financial situation of company. They are in external position to company, but their decision is addicted to knowledge about financial health of company. They are called as external group of users and among them especially belong: suppliers, buyers, competitors and state. (13)

2.1.4 Financial Ratios

Financial analysis is a methodology used to provide relevant information for decision-making. The main source of this information is published financial statements. Various accounts from statements are evaluated in relation to each other to form performance indicators. These financial indicators are known as financial ratios and are compared to established standards from the firm or other firms from the industry. Financial ratios are more convenient to interpret than financial statement accounts because financial ratios represent "relationships" between various items from financial statements. (11)

Ratios constitute the main tools of conventional financial analysis and some of them are particularly relevant to the prediction of economic events. Financial ratios provide a valuable tool, which measures the progress against internal goals that were predetermined, against a certain competitor, or against the overall industry. In addition, tracking various ratios over time is a powerful way how to identify trends as they develop. The calculation of business ratios is straightforward, but the value of them lies in their interpretation. (5)

Next subchapter defines following ratios:

- Absolute Ratios
  - Horizontal and vertical analysis
- Proportion Ratios
  - Profitability, efficiency,
  - Liquidity, solvency
- Differential Ratios
  - Net working capital
  - Net quick assets
  - Net cash assets
- Cash flow analysis
- System of Ratios
  - Altman Z-Score
  - Index IN05
  - Quick test

2.2 Absolute Ratios

Absolute ratios analysis includes horizontal and vertical analysis. Absolute ratios come directly from company's financial statements. Analysed data are compared with data from previous accounting year.

2.2.1 Horizontal Analysis

Horizontal analysis is also known as comparative analysis. This analysis is conducted by setting consecutive balance sheet, income statement or statement of cash flow side-by-side. Then changes are review in individual categories on a year-to-year or multiyear basis.

The most important item revealed by comparative financial statement analysis is trend. Direction, speed and extent of a trend are revealed thanks to a comparison of statements over several years. The horizontal financial statements analysis is done by a new formulation amount of each item as a percentage. Such percentages are calculated by selecting a base year and assign a weight of 100 to the amount of each item in the base year statement. Thereafter, the amounts of similar items or groups of items in prior or subsequent financial statements are expressed as a percentage of the base year amount. The resulting figures are called index numbers or trend ratios. (3)

2.2.2 Vertical Analysis

Vertical analysis is a method of financial statement analysis in which each entry for each of the three major categories of accounts (assets, liabilities and equities) in a balance sheet is represented as a proportion of the total account. The main advantage is that the balance sheets of businesses of all sizes can be easily compared. Easier is also to see relative annual changes in one business. Vertical analysis contrasts with horizontal analysis, which uses one year's worth of entries as a baseline while every other year represents differences in terms of changes to that baseline.

An analyst can compare the percentage mark-up of asset items and how they have been financed. The strategies may include increase or decrease the holding of certain assets. The analyst may observe the trend of the assets and liabilities over several years as well. (3)

2.3 Proportion Ratios

2.3.1 Profitability Ratios

Profitability ratios are the financial statement ratios, which focus on how well a business is performing in terms of profit. The profitability ratios portray the ability of the firm to efficiently use the capital committed by stockholders and lenders to generate revenues in excess of expenses. These ratios are consequently of interest to both stockholders and bondholders. However, it is important to note that many factors can influence these ratios, including changes in price, volume, or expenses, as well the purchase of assets or the borrowing of money. (11)

Return on Investment (ROI)

Return on Investment is a key ratio for investors. This ratio provides a standard return on investor's equity. It expresses efficiency of capital contribution regardless of financial resource.

$$ROI = \frac{EBIT + Costs\ Interests}{Liabilities\ and\ Capital} . 100\%$$

Recommended value of this ratio moves within the limits 12 - 15 %. ROI is really good, if the ratio overreaches the limit of 15 %. (11)

Return on Assets (ROA)

Return on assets indicates how effectively profits are being generated from the assets employed. The return on assets ratio provides a standard for evaluating how efficiently financial management employs the average crowns invested in the firm's assets, whether the crown came from investors or creditors.

$$ROA = \frac{Net\ Income}{Total\ Assets} . 100\%$$

The value should be lower than value of return on investment. Standard value is about 9 %. A low value indicates that the earnings are low for the amount of assets. (11)

Return on Equity (ROE)

Another common measure of profitability is the return on owners' equity (ROE), which is the ratio of net income to owners' equity. The owners find out if their capital brings sufficient yield. (13)

$$ROE = \frac{\text{Net Income}}{\text{Owners' Equity}} \cdot 100\%$$

The standard value of this ratio is 10 %. and at the same time ROE should be higher than ROA (ROE > ROA).

Return on Sales (ROS)

Return on sales is a company's operating profit or loss expresses as a percentage of total sales for a given period, typically a year.

$$ROS = \frac{\text{Net Income}}{\text{Sales}} \cdot 100\%$$

This ratio has its limits, since it sheds no light on the overall cost of sales or the four factors that contribute to it: materials, labour, production overheads, and administrative and selling overheads. Although ROS is another tool used to analyse profitability, it is perhaps a better indicator of efficiency. (13)

2.3.2 Efficiency Ratios

Efficiency ratios measure how effectively a business uses and controls its assets. They are intended to convey various aspects of operational efficiency. If a company has more assets than it is necessary, needless costs and lower profit is creating. On the other side, if the company has a lack of assets, business opportunities and yields are loosing. These ratios show how quickly the company is collecting money for its credit sales or how many times inventory turns over in a given time period. This information helps management decide whether the company's credit terms are appropriate and whether its purchasing efforts are handled in an efficient manner. (11)

Total Assets Turnover

The total assets turnover ratio examines the capital intensity of the business. It measures the use of all assets in terms of sales, by comparing sales with net total asset. A business which requires a lower asset base to deliver the same volume of sales will be more attractive than a business with a higher asset base, when all things being equal. (5)

$$\text{Assets Turnover} = \frac{\text{Sales}}{\text{Total Assets}}$$

The recommended value of this ratio moves at intervals of 1.6 – 3. If the ratio is lower than 1.5, it is necessary to examine possibilities of effective decreasing of total assets. If the value of this ratio is lower than branch standard value, sales should be increase or some of assets should be sold.

Fixed Assets Turnover

Fixed assets turnover ratio is used as a measure of the relationship between sales and the fixed assets used by the firm for its operations. It indicates how well the business is using its fixed assets to generate sales. (11)

$$\text{Fixed Assets Turnover} = \frac{\text{Sales}}{\text{Fixed Assets}}$$

If the value is under branch standard value, it is suitable to increase sales or reduce company's investments.

Inventory Turnover Period

Inventory turnover time indicates number of days, when inventory is bounded in a company till the time of its consumption.

$$\text{Inventory Turnover Period} = \frac{360 \cdot \text{Inventory}}{\text{Sales}}$$

It is considered desirable to have an inventory turnover period close to the industry

norm. A turnover period that is too high might mean that too much capital is tied up in inventory and it could mean that the inventory is obsolete. A processing period that is too low might indicate that the company has inadequate stock on hand, which could adversely impact sales. (14)

Receivables Turnover Period

Receivables turnover period is the average number of days it takes for the company's customers to pay their bills. It measures how quickly credit sales are collected. It is an indicator of the efficiency in the collection efforts of accounts receivable. (11)

$$\text{Receivables Turnover Period} = \frac{360 \cdot \text{Receivables}}{\text{Sales}}$$

Recommended period of receivables turnover is 36 days. A steady or declining average collection period is attractive because this indicates that the firm's collection efforts are not worsening. It is usually desirable to have a receivables turnover period close to the industry standard. A period that is too high might mean that customers are too slow in paying their bills, which means too much capital is tied up in assets. On the contrary, when this period is too low, it might indicate that the company's credit policy is too strict, which could hamper sales. (13)

Payables Turnover Period

Payables turnover period is the average amount of time it takes the company to pay its bills.

$$\text{Payables Turnover Period} = \frac{360 \cdot \text{Payables}}{\text{Sales}}$$

If a company has a below-average industry period it may be able to slow payments and improve its cash conversion rate and working capital requirements. If a company is above the industry average it may indicate liquidity problems for the firm. Payables turnover period should be longer than receivables turnover period. (13)

2.3.3 Liquidity Ratios

Liquidity ratios are used to assess the ability of the company to pay its current obligations. They relate to the availability of cash and other assets to cover accounts payable, short-term debt, and other liabilities. All small businesses require a certain degree of liquidity in order to pay their bills on time. Start-up and very young companies are often not very liquid. If liquidity in mature companies is low, it can indicate poor management or a need for additional capital. Liquidity may vary due to seasonality, the timing of sales, and the state of the economy. Liquidity ratios are of prime interest to short-term lenders and help small business owners with useful limits regulate borrowing and spending. (11)

Current Ratio

The current ratio examines the ability of the business to meet short-term debts. It is difficult to provide guidance on what the appropriate level for the current ratio should be in any one industry. Current assets are composed mainly of cash, short-term marketable securities, accounts receivable, inventories, and prepaid expenses. Current liabilities are composed mainly of accounts payable, dividends, taxes payable, and short-term bank loans. (11)

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities + Current Bank Loans}}$$

The generally acceptable current ratio lies between 1.5 – 2.5. If the ratio is less than 1 it means that the company's liquidity is low and the company may not be able to pay its bills on time. Anything above 2.5 would be regarded as robust and it means that the company has money in cash or safe investments that could be put to better use in the business.

High current ratios are needed for companies that have difficulty borrowing on short-term notice. The best benchmarks will come from other businesses within the sector. (4)

Quick Ratio

A stronger test of liquidity is provided by the quick ratio. The quick ratio recognises that some assets are closer to cash than others. Quick assets include liquid short-term securities and debtors in the nominator, stock is excluded from the numerator of the ratio and current liabilities are as previously defined. This ratio is important for short-time creditors.

$$\text{Quick Ratio} = \frac{\text{Quick Assets}}{\text{Current Liabilities + Current Bank Loans}}$$

$$\text{Quick Assets} = \text{Current Assets} - \text{Inventories}$$

It is suitable to compare this ratio with the current ratio. Ideally, quick ratio should be 1 – 1.5. If it is lower, it may indicate that the company relies too heavily on inventory to meet its obligations and this value under 1 is unacceptable for banks, because the company suffers primary insolvency. If it is higher, the company may keep too much cash on hand or have a poor collection program for accounts receivable. Higher quick ratios are needed when a company has difficulty borrowing on short-term notice. Like the current ratio, the result must be placed in the context of the business plan and the stage of development of the business. (4)

Cash Ratio

The cash ratio measures the immediate amount of cash available to satisfy short-term debt.

$$\text{Cash Ratio} = \frac{\text{Financial Property}}{\text{Current Liabilities + Current Bank Loans}}$$

The recommended value of this ratio lies within the limits 0.2 – 0.5. Although a high ratio may indicate some degree of safety from a creditor's viewpoint, excess amounts of cash may be viewed as inefficient, because it shows not very good management of company’s capital. (1)

2.3.4 Solvency Ratios

Solvency ratios are measures to assess a company's ability to meet its long-term obligations and thereby remain solvent and avoid bankruptcy. They also tell investors how the company has been financed (debt or equity) and whether that is changing over time. The term insolvency means that company to finance its assets uses liabilities. The main motive of financing its activities by liabilities is relatively lower price in comparison with owners' equity. These ratios measure the extent the company is financed by liabilities. By looking at these ratios, it helps to assess company's level of debt and decide whether this level is appropriate. (2)

Debt Ratio

The debt ratio compares a company's total debt to its total assets. It gives a general idea to the amount of leverage being used by a company. A low percentage means that the company is less dependent on leverage, i.e., money borrowed from and/or owed to others. The lower the percentage, the less leverage a company is using and the stronger its equity position.

$$\text{Debt Ratio} = \frac{\text{Total Liabilities}}{\text{Total Assets}} \cdot 100\%$$

In general, the higher the ratio, the more risk that company is considered to have taken on. But the higher ratio does not have to be valuated in negative way, relationship concerns with the price of liabilities and owners' equity. Creditors prefer low value; owners need higher leverage to multiply their profits. The recommended value of thr ratio moves from 30 – 70 %.

Division of the debt ratio:

0.3…….low
0.3 – 0.5…average
0.5 – 0.7…high
0.7…….risky

Self-Financing Ratio

The self-financing ratio expresses a extent of insolvency of owners' equity. The ratio is a supplement to the debt ratio and the sum of these ratios has to be equal to 1. Both ratios inform about financial structure of company.

$$\text{Self-Financing Ratio} = \frac{\text{Owners' Equity}}{\text{Total Assets}}. 100\%$$

The recommended value of this ratio should be higher than 0.5. The minimum is 0.3.

Interest Coverage

This ratio measures company's ability to pay its interest charges. It says, how many times profit surpasses interest expenses. Debt providers will often look at interest cover in conjunction with gearing ratios. (2)

$$\text{Interest Coverage} = \frac{\text{EBIT}}{\text{Interest Expenses}}$$

If the ratio was equal to 1, it would mean that the company is capable to pay interests, even though has no profit. Bank standards recommend having value of this ratio 3. But values from 6 to 8 mean financial healthy company as well.

Long – Term and Current Insolvency

Long – term insolvency expresses, which part of assets is financed by long – term debts. It helps to find optimal proportion of long and short – term borrowed capital. Current insolvency compares short – term capital to total assets. (2)

$$\text{Long – Term Insolvency} = \frac{\text{Borrowed Capital}}{\text{Total Assets}}$$

$$\text{Current Insolvency} = \frac{\text{Short –Term Capital}}{\text{Total Assets}}$$

2.4 Differential Ratios

To do an analysis of company's financial situation, the differential ratios are used as well. They are called as funds of financial resources. The most used are ratios of net working capital, net quick assets and net cash assets. These differential ratios come from presumption, that part of current assets of company is financed by long-term total assets. (8)

2.4.1 Net Working Capital

Net working capital is the most used ratio of differential ratios. It presents a part of current assets that are covered by long-term sources. Thanks to its long-term is net working capital used for eventual financial ups downs.

Net working capital is possible to calculate according following formulas, where the first one is considering as an investor approach and the second one is a managerial approach:

$$\text{Net Working Capital} = \text{Long Term Capital} - \text{Long Term Assets}$$

Or

$$\text{Net Working Capital} = \text{Current Assets} - \text{Short-Term Liabilities}$$

The difference between assets and short-term liabilities influences among others solvency of company. The positive value of net working capital means that company has a good financial background and it is liquid. The higher value of net working capital, the higher ability of company to pay its liabilities. On the contrary the negative value of net working capital means so-called unfounded debt. To increase net working capital it is necessary to increase current assets or decrease short-term liabilities of company. (8)

The disadvantage of calculation of net working capital is possible elements included in current assets, for example unenforceable or hard unenforceable credits, unsaleable reserves of finished products and also too high reserves. The ratio of net working capital is influenced by method of appreciation as well. (12)

2.4.2 Net Quick Assets

The second ratio from differential ratios is net quick assets ratio. It is used to monitor immediate liquidity because it presents the difference between available cash and short-term liability fallen due.

$$\text{Net Quick Assets} = \text{Available Cash} - \text{Liability Fallen Due}$$

To calculate the highest level of liquidity, we have to include only cash and money on bank accounts into available cash. Immediate liabilities fallen due are liabilities payable to current date or older. The net quick assets ratio is not influenced by any method of appreciation, but it is easily influenced by move of payments (retention or earlier realization of payments).

2.4.3 Net Cash Assets

The net cash assets ratio or the net cash-receivables financial funds ratio presents a compromise between net working capital ratio and net quick assets ratio. To calculate the net cash assets ratio it is necessary to cut out less liquid items (i.e. stock, non-liquid receivables).

$$\text{Net Cash Assets} = (\text{Current Assets} - \text{Stock}) - \text{Short-Term Liabilities}$$

2.5 Cash Flow Analysis

Cash flow presents the real movement of company's cash. It is a real flow of money (inflow and outflow of money) within certain period. The cash flow statement informs about result of increasing or decreasing of money to a certain date.

Cash flow analysis is an important tool for managing liquidity, because it is necessary to consider the fact, that there is a time disharmony between costs and expenses and between yields and incomes. Incomes from operation and economic processes are recorded at the moment of realization of payments in accounting. There is a difference between movement of tangible items and their financial formulation (i.e. purchase goods on business credit).

Cash flow statement is possible to set on basis of balance sheet and income statement.

They are divided into three categories:

- Operational cash flow
- Investment cash flow
- Financial cash flow

Cash increases when debts and owners' equity increases (borrowing from creditors) or when assets decrease (sale of fixed or current assets). Otherwise cash decreases when debts decrease (payments of credit) or when assets increase (purchase of fixed or current assets). The purpose of cash flow statement is to give information about company's ability to create cash and information about using cash as well.

There are two approaches leading to calculate cash flow:

- Direct method
- Indirect method

Direct Method

The direct method is called method based on monitoring real incomes and expenses. This method comes directly from changes of cash, which are caused by economic transactions. The disadvantage of this method is a fact that there are no accounts for incomes and expenses in accounting. To find out incomes and expenses is then problematic.

Indirect Method

The indirect method is mostly used in practise. It comes from income statement, rather from income from operations, which is consequently transformed into cash. The indirect method reposes upon profit removal of non-cash items and of balance changes that are the difference between flows of incomes and expenses and between yields and costs. There are well-arranged differences between profit and cash flow. (12)

2.6 System of Ratios

There are many proportion or other ratios to do a financial analysis of situation in a company. But their disadvantage leans on giving information only about certain area of company's activities. That is why system of ratios is used to do an overall financial analysis.

System of ratios are divided into:

- Hierarchal arranged system of ratios
    - Pyramidal analysis

- General evaluation models of financial situation
    - Models of value
    - Models of bankruptcy

2.6.1 Pyramidal Analysis

Pyramidal analysis serves to identify logical and economical connection among ratios and their resolution. The keynote of pyramidal analysis is gradual resolution of the peak ratio to partial ratios, which serve to identification and to quantification of influence of partial ratios to the peak ratio (i.e. Dupont's resolution of ROE). (12)

2.6.2 Altman Z-Score

The Altman Z-Score belongs to the group of bankruptcy model. It is a quantitative balance-sheet method of determining a company's financial health. The Altman Z-Score is a measure of a company's health and likelihood of bankruptcy. Several key ratios are used in the formulation of an Altman Z-Score Value. New version of formula from 1983 is usable in Czech condition as well.

Altman's model comes from five ratios, which are measured and put together into one ratio. The model completes the financial analysis of company's situation. The formula is following:

$$Z = 0.717\ x_1 + 0.847\ x_2 + 3.107\ x_3 + 0.42\ x_4 + 0.998\ x_5$$

where:

$$x_1 = \frac{\text{Working Capital}}{\text{Total Assets}} = \frac{\text{Current Assets - Current Liabilities}}{\text{Total Assets}}$$

$$x_2 = \frac{\text{Retained Earnings}}{\text{Total Assets}}$$

$$x_3 = \frac{\text{Earnings Before Interest and Taxes}}{\text{Total Assets}}$$

$$x_4 = \frac{\text{Book Value of Equity}}{\text{Total Liabilities}}$$

$$x_5 = \frac{\text{Sales}}{\text{Total Assets}}$$

Zones of Discrimination:

Z > 2.9....."Safe" Zone: The company is safe, based on these financial figures.

1.2 < Z < 2.9..."Grey" Zone: This zone is an area where one should exercise caution.

Z < 1.2....."Distress" Zone: Probability of financial embarrassment is very high.

2.6.3 Index IN05

On the same principle as Altman's Z-score is founded index IN05 as well. Altman's model was used broadly after 1990 and was often criticised for unsuitability for Czech conditions. That is why Neumaier couple begun to develop IN models. Index IN05 has from the time point of view the lowest limitations and it is at the good level. This index is called trustworthiness of Czech enterprise as well. Index IN05 includes profitability, liquidity, activity and solvency ratios.

$$IN05 = 0.13\ x_1 + 0.04\ x_2 + 3.97\ x_3 + 0.21\ x_4 + 0.09\ x_5$$

where:

$$x_1 = \frac{\text{Total Assets}}{\text{Total Liabilities}}$$

$$x_2 = \frac{\text{Earnings Before Interest and Taxes}}{\text{Interest Expense}}$$

$$x_3 = \frac{\text{Earnings Before Interest and Taxes}}{\text{Total Assets}}$$

$$x_4 = \frac{\text{Earnings}}{\text{Total Assets}}$$

$$x_5 = \frac{\text{Current Assets}}{\text{Current Liabilities + Short-Term Bank Loan}}$$

Zones of Discrimination:

IN05 > 1.6 ..... The company makes a value.

0.9 < IN05 ≤ 1.6..... "Grey zone" of nondescript outcomes.

IN05 ≤ 0.9 ..... The company is going to a bankruptcy.

2.6.4 Quick Test

Quick test enables to analyse the company very fast and exactly. To make this test well-balanced, four proportion indicators were used (profitability, liquidity, capital power and insolvency).

$$\text{Self-Financing Coeficient} = \frac{\text{Owners' Equity}}{\text{Total Assets}}$$

$$\text{Cash-Flow Pay-off} = \frac{\text{Current Liabilities + Long-Term Liabilities – Financial Property}}{\text{Running Cash Flow}}$$

Self-financing coeficient shows how the company is able to cover its needs by own sources. Cash-flow pay-off ratio informs about the time needed to pay its liabilities. These two ratios characterise the financial stability of the company. The following two ratios analyse yield situation of the company.

$$\text{Cash Flow in Percent from Sales} = \frac{\text{Running Cash Flow}}{\text{Sales}}$$

$$\text{Return on Assets (ROA)} = \frac{\text{EBIT}}{\text{Total Assets}}$$

Each ratio has its degree scale. According to these scales, evaluations on basis of arithmetical average for the area of financial stability and performance are counted and consenquently evaluation of the whole company is done.

Ratio	**Excellent (1)**	**Very Good (2)**	**Good (3)**	**Bad (4)**	**Threatened by Insolvency (5)**
Self-Financing Ratio	> 30%	> 20%	> 10%	> 0%	Negative
CF Pay-off	< 3 years	< 5 years	< 12 years	> 12 years	> 30 years
CF in % from Sales	> 10%	> 8%	> 5%	> 0%	Negative
ROA	> 15%	>12%	>8%	> 0%	Negative

Figure 9 Ratio Degree Scale
Source: Own processing

3 ANALYSIS OF PROBLEM AND CURRENT SITUATION

In the chapter three there is the complex financial analysis of company's situation done. All ratios introduced in previous chapter are calculated. Financial statements from the period 2004-2008 are used.

3.1 Absolute Ratio Analysis

As mentioned in theoretical part, absolute ratio analysis comes directly from data contained in financial statements – the balance sheet and income statement.

The balance sheet shows state of assets and liabilities on the certain date, mostly on the last day of calendar year. The balance sheet records assets of company – what company owns and claims on one side and liabilities on the second side. Liabilities show how are the assets financed.

While the balance sheet is the statement on the certain date, the income statement shows a flow of money for a certain period. The income statement gives an overview of costs and yields of company. The difference between yields and costs is the profit or the loss.

It is possible to examine if the company asserts so-called balance rules in its activity. These rules are recommendations that the management should follow with the aim to reach long-term balance and stability in financial field (7):

- **The gold rule of financing** – it is suitable to harmonise time duration of property parts with time duration of financial sources. Fixed assets are financed by owners'equity or long-term liabilities.
- **The gold rule of risk equilibration** – own sources should be higher than foreign liabilities or should be equal at least.
- **The gold pari rule** – fixed assets and own sources are equal only occasionally considering that company uses foreign sources as well.
- **The gold proportion rule** – the rate of investments increasing neither should be higher than the rate of sales growing, neither during the short-time period.

3.1.1 Horizontal Analysis

Horizontal Analysis of Balance Sheet

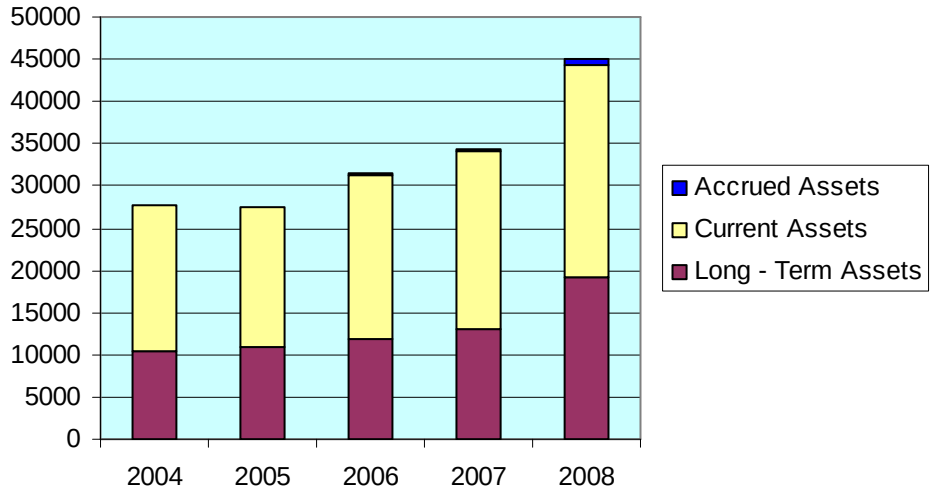
The table 1 contains annual increase or decrease of chosen items of balance sheet during the period under consideration in absolute values (in thousands CZK) and in percentage as well. Trend of balance sheet items during single years are shown on graph 1, 2 and 3.

Table 1 Horizontal Analysis of Balance Sheet; Source: Own calculation

	2005/04		2006/05		2007/06		2008/07	
(In thousand CZK); %		%		%		%		%
TOTAL ASSETS	**-246**	**-0.9**	**4044**	**14.7**	**2817**	**8.9**	**10663**	**31.0**
Long-term Assets	450	4.3	988	9.1	1289	10.9	6214	47.5
Long-term intangible assets	153	382,5	966	500.5	942	81.3	-593	-28.2
Long-term tangible assets	297	2,9	22	0.2	347	3.3	6807	62.0
Long-term financial assets	0	-	0	-	0	-	0	-
Current Assets	-729	-4.2	2945	17.7	1596	8.2	3853	18.2
Inventories	-196	-39.3	62	20.5	304	83.3	-385	-57.5
Short-term receivables	-20	-0,2	1015	10.0	-675	-6.1	4569	43.6
Long-term receivables	0	-	0	-	0	-	0	-
Financial property	-513	-7.7	1868	30.3	1967	24.5	-331	-3.3
Accrued Assets	33	37,9	111	92.5	-68	-29.4	576	353.4
LIABILITIES + CAPITAL	**-246**	**-0.9**	**4044**	**14.7**	**2817**	**8.9**	**10663**	**31.0**
Owners' Equity	795	4.0	3504	17.0	1736	7.2	3365	13.0
Book value of equity	0	0.0	0	0.0	0	0.0	0	0.0
Reserve funds, ..	100	8.2	80	6.1	219	15.6	168	10.4
Capital funds	0	0.0	0	0.0	0	0.0	0	0.0
Income from op. of last years	1012	16.6	637	8.9	2559	33.0	2584	25.0
Inc. from op. of curr. period	-317	-16.6	2787	175.3	-1042	-23.8	613	18.4
Borrowed Capital	-1396	-17.7	944	14.6	844	11.4	7303	88.3
Reserves	0	-	0	-	0	-	0	-
Long-term liabilities	31	38.3	6	5.4	5	4.2	-28	-22.8
Current liabilities	-427	-7.1	1688	30.0	839	11.5	2331	28.6
Bank loan:	-1000	-57.1	-750	-100.0	0	-	5000	-
Long term bank loan	-1750	-100.0	0	-	0	-	3800	-
Current bank loan	750	-	-750	-100.0	0	-	1200	-
Accrued Liabilities and Cap.	355	724.5	-404	-100.0	237	-	-63	-26.6

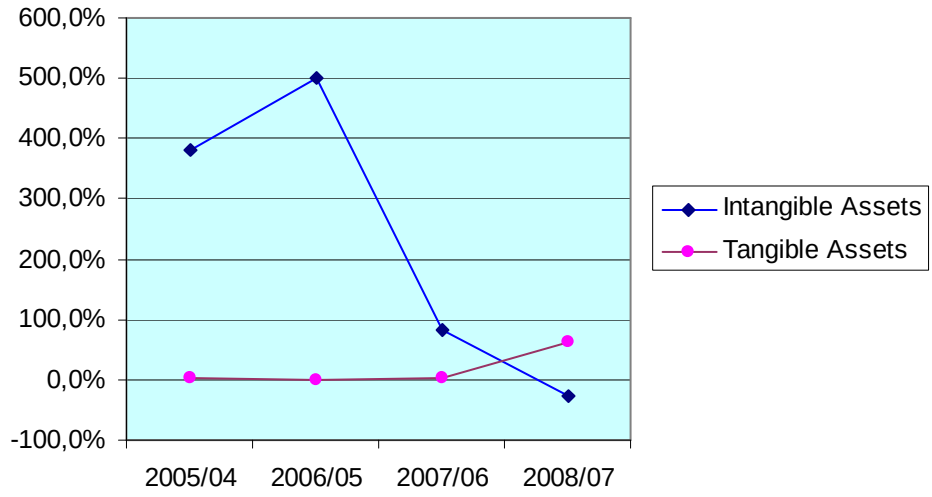
Total Assets

Horizontal analysis monitors the trend of individual items of statement during the time period. The main element in trend of assets is their annual increase (see graph 1).



Graph 1 Total Assets Trend (In thousands CZK)
Source: Own processing

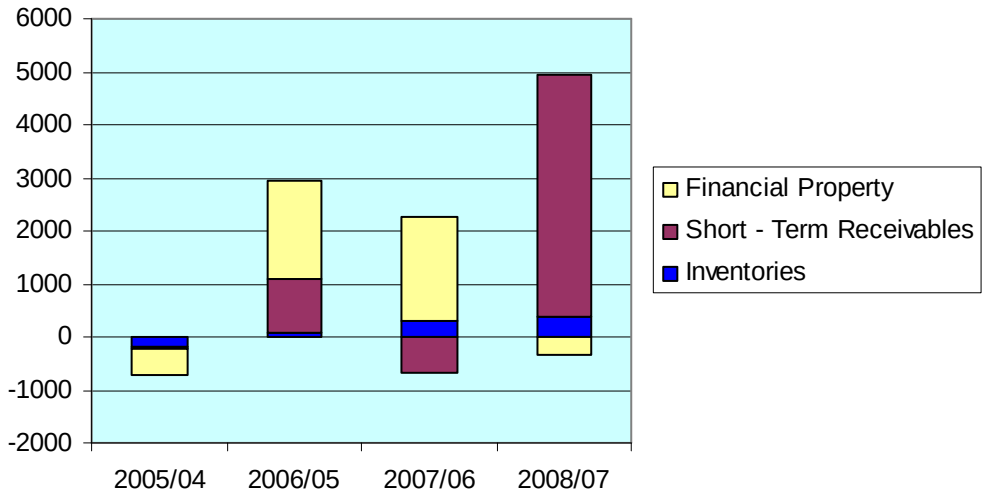
From the graph 1 is obvious that the increase of total assets was caused mainly by long – term assets increase. The main increase of long – term assets value was in 2008 for 6,214,000 CZK, it means 47.5% increasing. The trend of long – term assets items is shown in percentage on the following graph 2.



Graph 2 Long – Term Assets Trend
Source: Own processing

Long – term assets are divided into long – term intangible, tangible and financial assets. There was no long – term financial assets. Long – term intangible assets were increasing during the period 2004 – 2006 and then were gradually decreasing. In 2007 new information system HIFIS and economic program POHODA were implemented. Long – term tangible assets were approximately constant till 2008 when the construction of new building in Brno began. The value of unfinished long – term tangible assets increased from 258,000 CZK in 2007 to 7,191,000 CZK in 2008.

Current assets are divided into inventories, long – term and short – term receivables, and short – term financial property.



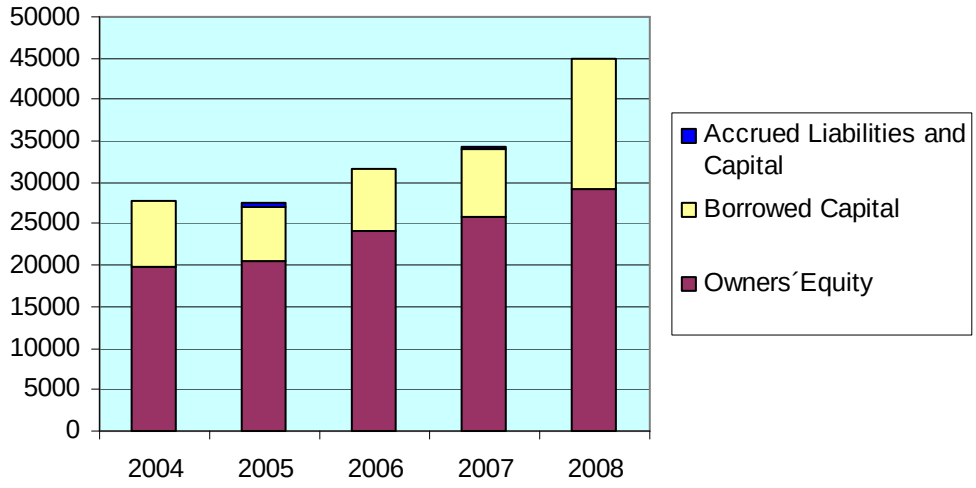
Graph 3 Current Assets Trend
Source: Own processing

Short – term receivables recorded the highest move during the period 2004 – 2008. They were presented mainly by receivables from business relations. In 2008 short – term receivables increased for 4,569,000 CZK, this means 43.6% compared to previous year. This change was caused by higher volume of work contracts. Short – term financial property was influenced mainly by money on bank accounts. The highest increase for 30.3% (1,868,000 CZK) was during the period 2005 – 2006, similarly the next years, then they felt down for 3.3% in 2008. The trend of inventories was variable.

Accrued assets were gradually increasing with exception in 2007, the biggest increase of 576,000 CZK meant the change of 353.4% was in 2008. The changes of value were mainly given by accrued costs.

Total Liabilities and Capital

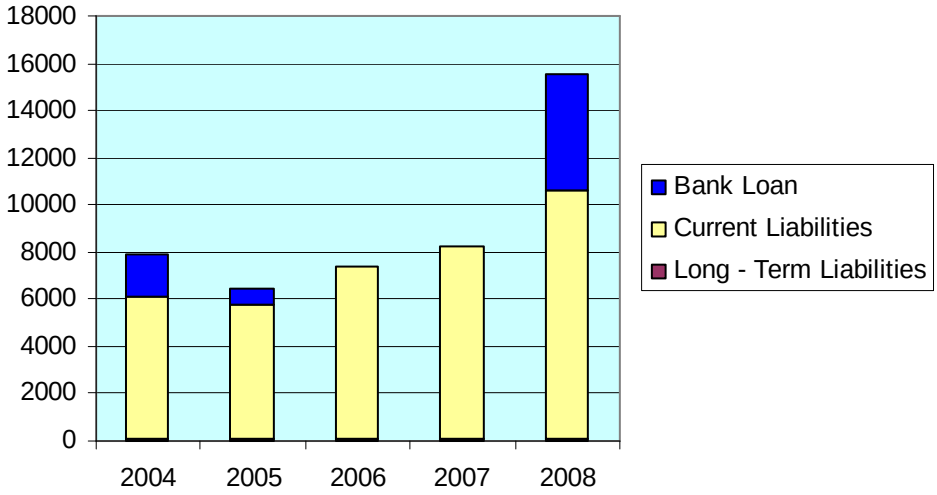
The total value of liabilities and capital achieved 45,057,000 CZK in 2008, what is 31% higher than in previous year. The trend of total liabilities and capital is shown on the following graph 4.



Graph 4 Total Liabilities and Capital Trend (In thousands CZK)
Source: Own processing

Owners' equity was slightly increasing during the whole period. The fastest grow of 17%, (3,504,000 CZK) was in 2006. The book value of equity stayed same for the whole period, its value was 10,600,000 CZK. Income from operation of current period recorded a rapid growth in 2006, the change was for 175.3% (2,787,000 CZK), and then was gradually falling.

Borrowed capital was also slightly increasing with exception in 2005. The biggest change of 88.3% (7,303,000 CZK) was in 2008. This most visible change in the structure of borrowed capital was on the side of bank loans. The company took 5,000,000 CZK on credit to build a new workplace in Brno in 2008. More than half of the amount 3,800,000 CZK was taken on long – term credit, the rest of 1,200,000 CZK on short – credit. Long – term liabilities had falling tendency during the whole period and on the other side, short – term liabilities had the opposite tendency. The company had no reserves.



Graph 5 Total Liabilities and Capital Trend (In thousands CZK)
Source: Own processing

Accrued liabilities and capital increased in 2005 thanks to accrued yields and then had falling tendency during the period 2005-2008.

Horizontal Analysis of Income Statement

The table 2 on the following page shows horizontal analysis of income statement. In 2005 the production increased for 9.3%, but the production consumption increased only for 2.7%. It influenced increasing of added value. The positive fact is, that the production was increasing faster than production consumption. Personnel expenses increased for 17.1% mainly thanks to wages increase because of inflation. The company operation profit decreased for 554,000 CZK what influenced total profit negatively.

The year 2006 was for company successful, there was an increase of almost 145% in operation profit and almost 40% in profit from financial operations. Total profit of current period increased for 2,787,000 CZK that year.

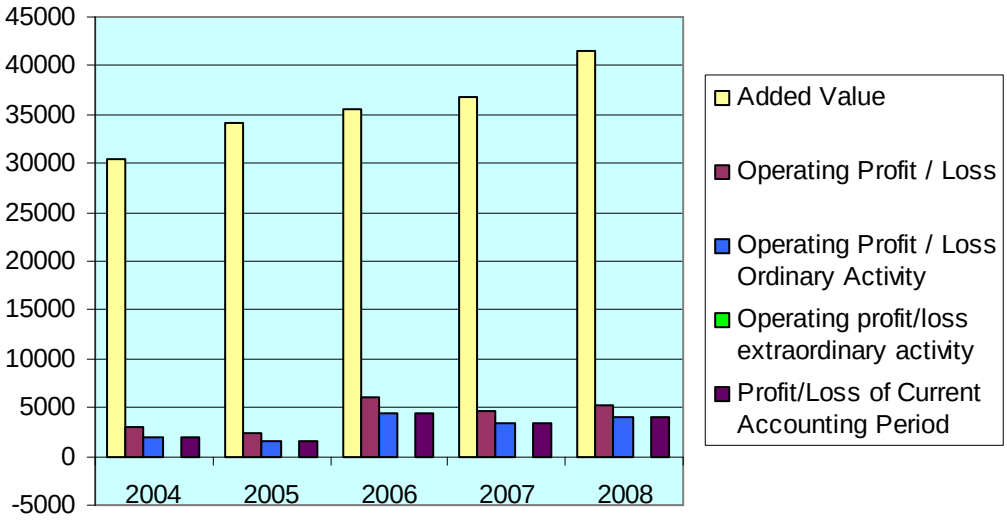
The production in 2007 slightly decreased, as well as production consumption. The total profit decreased for almost 24%, which was 1,420,000 CZK.

In 2008 there was a negative trend of faster production consumption than production, but the added value still showed increasing. Although profit from financial operation got worse, it suffered a decrease of 209%, the total profit increased compared to previous year for 18.4%.

Table 2 Horizontal Analysis of Income Statement; Source: Own calculation

	2005/04		2006/05		2007/06		2008/07	
(In thousand CZK); %		%		%		%		%
Revenues from sold goods	-11	-100	0	-	0	-	0	-
Expenses on sold goods	-11	-100	0	-	0	-	0	-
Sale margin	0	-	0	-	0	-	0	-
Production	4057	9.3	868	1.8	-1817	-3.7	6524	13.9
Rev. from own products,services	4416	10.1	626	1.3	-2114	-4.3	7231	15.5
Change in invent.of own product	-411	-196.7	244	-120.8	281	669	-700	-216.7
Production consumption	363	2.7	-451	-3.3	-3125	-23.7	1952	19.4
Consumption of mat. and energy	712	33.6	-955	-33.7	-249	-13.3	573	35.2
Services	-349	-3.1	504	4.7	-2876	-25.4	1379	16.4
Added value	3694	12.1	1319	3.9	1308	3.7	4572	12.4
Personnel expenses	4424	17.1	-1898	-6.3	2452	8.6	3335	10.8
Deprec. of int. and tan. assets	-31	-2.3	-158	-12.1	-8	-0.7	482	42.2
Rev.from disposals of fix.as.,mat	1	1.3	-31	-39.7	54	114.9	-74	-73.3
Other operating revenues	-178	-100	152	-	12	7.9	737	449.4
Other operating expenses	-1546	-89.9	182	105.2	10	2.8	287	78.6
Operating profit / loss	-554	-18.5	3538	144.6	-1361	-22.7	589	12.7
Other financial revenues	123	-	-25	-20.3	-98	-100	2	-
Other financial expenses	252	536,2	-73	-24.4	-177	-78.3	11	22.4
Profit/loss from finan. operations	-101	-71.1	99	40.7	99	68.8	-94	-208.9
Income tax on ordinary income	-252	-29.1	850	138.7	-220	-15	-118	-9.5
Op. profit / loss ordinary activity	-403	-20.2	2787	175.3	-1042	-23.8	613	18.4
Extraordinery revenues	0	-	0	-	0	-	0	-
Extraordinery expenses	-86	-100	0	-	0	-	0	-
Income tax on extraord. income	0	-	0	-	0	-	0	-
Op. profit/loss extraord. activity	86	100	0	-	0	-	0	-
Profit/loss of current acc. period	-317	-16.6	2787	175.3	-1042	-23.8	613	18.4
Profit/loss before tax	-569	-20.5	3637	165.1	-1262	-21.6	495	10.8

The following graph shows a trend of added value and chosen profits. Operation profit from extraordinary activity had zero values during the period with exception in 2004. It caused that operation profit from ordinary activity and profit of current accounting period were in the following years equal.



Graph 6 Income Statement Trend (In thousands CZK)
Source: Own processing

3.1.2 Vertical Analysis

Vertical Analysis of Balance Sheet

Vertical analysis observes the percentual representation of single items of assets and liabilities on total. As a 100% base was used total assets/ total liabilities and capital. Around 60% of assets are current assets. From the closer point of view, the main part of current assets (30-37%) is created by short – term receivables. Indispensable item was financial property with overall proportion of approximately 25% on total assets.

Table 3 Vertical Analysis of Total Assets; Source: Own calculation

(In thousand CZK)	**2004**	**2005**	**2006**	**2007**	**2008**
TOTAL ASSETS	100.0%	100.0%	100.0%	100.0%	100.0%
Long-term Assets	37.3%	39.2%	37.3%	38.0%	42.8%
Long-term intangible assets	0.1%	0.7%	3.7%	6.1%	3.3%
Long-term tangible assets	37.1%	38.5%	33.7%	31.9%	39.5%
Long-term financial assets	0.0%	0.0%	0.0%	0.0%	0.0%
Current Assets	62.4%	60.3%	61.9%	61.5%	55.5%
Inventories	1.8%	1.1%	1.2%	1.9%	0.6%
Short-term receivables	36.6%	36.8%	35.3%	30.5%	33.4%
Long-term receivables	0.0%	0.0%	0.0%	0.0%	0.0%
Financial property	24.1%	22.4%	25.5%	29.1%	21.5%
Accrued Assets	0.3%	0.4%	0.7%	0.5%	1.6%

In the table 4 is done vertical analysis of total liabilities and capital of the company. The proportion of owners' equity was approximately around 70%. The biggest item of owners' equity was made by book value of equity (35%) and by income from operations of last years (25%). Borrowed capital was approximately 25% of total liabilities and capital and was made mainly by current liabilities (23%). In 2004 and 2008 the company took a long – term bank loan that influenced the proportion of borrowed capital on total liabilities and capital.

Table 4 Vertical Analysis of Total Liabilities and Capital; Source: Own calculation

(In thousand CZK)	**2004**	**2005**	**2006**	**2007**	**2008**
LIABILITIES AND CAPITAL	100.0%	100.0%	100.0%	100.0%	100.0%
Owners'Equity	71.5%	75.0%	76.5%	75.3%	64.9%
Book value of equity	38.2%	38.5%	33.6%	30.8%	23.5%
Reserve funds, …	4.4%	4.8%	4.4%	4.7%	4.0%
Capital funds	0.1%	0.1%	0.1%	0.0%	0.0%
Income from op. of last years	22.0%	25.9%	24.6%	30.0%	28.6%
Income from op. of current period	6.9%	5.8%	13.9%	9.7%	8.8%
Borrowed Capital	28.4%	23.5%	23.5%	24.0%	34.6%
Reserves	0.0%	0.0%	0.0%	0.0%	0.0%
Long -term liabilities	0.3%	0.4%	0.4%	0.4%	0.2%
Current Liabilities	21.8%	20.4%	23.1%	23.7%	23.3%
Bank loan:	6.3%	2.7%	0.0%	0.0%	11.1%
Long term bank loan	6.3%	0.0%	0.0%	0.0%	8.4%
Current bank loan	0.0%	2.7%	0.0%	0.0%	2.7%
Accrued Liabilities and Capital	0.2%	1.5%	0.0%	0.7%	0.4%

3.1.3 Verification of Golden Rules

- **The gold balance rule**

The gold balance rule contains two conditions. The first one demands covering of long - term (fixed) assets by long - term sources, which are summary of owners´equity, long-term liabilities and long - term bank loans. The second one says that current sources should not be bounded to current assets, but current assets should be covered by current sources.

Table5 The Gold Balance Rule (In thousands CZK); Source: Own processing

Year	Long-term Assets		Long-term Sources
2004	10349	<	21683
2005	10799	<	20759
2006	11787	<	24269
2007	13076	<	26010
2008	19290	<	33147

Year	Current Assets		Current Sources
2004	17343	>	6047
2005	16614	>	6370
2006	19559	>	7308
2007	21155	>	8147
2008	25008	>	11678

The first condition was fulfilled absolutely. Long – term assets were covered by long – term sources approximately twice than it is recommended. They were not covered by risky short – term sources which could lead to insolvency, i.e. if sales suddenly decrease. The second condition was fulfilled only to approximately 40%. Current sources were bounded to current assets in case of 60%.

- **The gold rule of risk equilibration**

According to the gold rule of risk equilibration, that owners' equity should be higher than borrowed capital was this rule absolutely fulfilled.

Table 6 The Gold Rule of Risk Equilibration (In thousands CZK); Source: Own processing

Year	Owners' Equity		Borrowed Capital
2004	19852	>	7878
2005	20647	>	6482
2006	24151	>	7426
2007	25887	>	8270
2008	29252	>	15573

- **The gold pari rule**

The gold pari rule demands covering of long - term assets by owners' equity. This means quite conservative and careful approach that allows usage of financing by long - term borrowed capital. In practise is not often kept, as well as in case of the company.

- **The gold proportion rule**

The rate of investments increasing was higher than the rate of sales growing, with exception in 2007.

3.2 Proportion Ratios Analysis

All ratios mentioned in the theoretical part are step by step calculated within the frame of proportion ratios analysis.

3.2.1 Profitability Ratios Analysis

Profitability ratios measure relation between profit and capital. The higher are values of profitability ratios, the better is company's management of invested sources.

Table 7 Profitability Ratios Analysis; Source: Own calculation

	2004	2005	2006	2007	2008
ROI	10.4%	8.3%	18.6%	13.3%	11.5%
ROA	6.9%	5.8%	13.9%	9.7%	8.8%
ROE	9.6%	7.7%	18.1%	12.9%	13.5%
ROS	4.3%	3.3%	9.0%	7.1%	7.3%

Return On Investment (ROI)

Recommended values of this ratio lie in the interval of 12% - 15%. In 2004 and 2005 company reached very weak results. The most effective management of the company was in 2006, when the value was over 18 %. It is desirable to have the highest values and growing tendency.

Return On Assets (ROA)

The standard value of this ratio is about 9%. The company's value was moving under the recommended value in 2004 and 2005. In 2006 the value increased more than twice, it means the company used its property more effectively. The next years the value maintained around 9%.

Return On Equity (ROE)

Generally good value of this ratio is about 10%. The best year was 2006 again because of high net income reached this year, the value was around 18%. The other years can be evaluated positively with exception of 2005, when the value was under the standard.

Return On Sales (ROS)

The higher is the value, the better is the situation for the company. This ratio shows how many hellers of profit fall on 1 CZK of sales. The values in 2004 and 2005 were gradually falling down till 2006 when the value tripled. The next years the values maintained around 7%. If the values are lower than average, it signals either relatively low prices or too high costs.

3.2.2 Efficiency Ratios Analysis

Efficiency ratios evaluate how effectively the company uses its assets. The higher are the values of ratio, the higher is the efficiency of using company's property.

Table 8 Efficiency Ratio Analysis I; Source: Own calculation

	2004	2005	2006	2007	2008
Assets Turnover	1.6	1.7	1.5	1.4	1.2
Fixed Assets Turnover	4.2	4.5	4.1	3.6	2.8

Assets Turnover

The recommended value of this ratio moves at intervals of 1.6 – 3. The company's ratios were lower than 1.5 during the period 2006 – 2008. It is necessary to examine possibilities of effective decreasing of total assets. Sales should be increased or some of assets should be sold.

Fixed Assets Turnover

Fixed assets turnover was decreasing during the period 2004 – 2008 with exception in 2005. Lower values signals that it is necessary to increase industrial production, but in this case, it is a signal for management to shorten investments.

Table 9 Efficiency Ratio Analysis II; Source: Own calculation

(In days)	2004	2005	2006	2007	2008
Inventory Turnover Period	4	2	3	5	2
Receivables Turnover Period	77	70	81	79	97
Payables Turnover Period	10	18	17	7	14

Inventory Turnover Period

Inventory was bounded to the company till its sale on average of 3 days. The values were generally low because the values of inventory were low. The inventory turnover period was decreasing during the period with exception in 2007.

Receivables Turnover Period

This period varied from 70 to 97 days. The company should attempt to decrease this period to have money as soon as possible available to use. The increase in 2008 was caused by huge increasing of receivables from business relation. The company should observe this ratio and avoid to the next potential increasing. It is suitable to compare this ratio with current due date and if the value is higher than due date, the company should think about arrangements to quicken the time of receivables cash – ins. The time of receivables due date varies from 14 to 90 days according to a contract, it means that subscribers paid late and the company should think about mentioned arrangements.

Payables Turnover Period

This period varied from 7 to 18 days. The values were very low and it means that the company paid its liabilities earlier that it is common. For instance in 2008 the value was 14 days, in comparison with receivables turnover period, it is very negative. The company paid to its suppliers on the average in 14 days, but waited for its money from customers 97 days. During this period the company can suffer insolvency.

3.2.3 Liquidity Ratios Analysis

Permanent solvency ability belongs among basic conditions of successful existence of the company. It is necessary that company ensure sufficient amount of money to transform them into cash in case of necessity.

Table 10 Liquidity Ratios Analysis; Source: Own calculation

	2004	2005	2006	2007	2008
Current Ratio	2.2	2.6	2.7	2.6	2.1
Quick Ratio	2.2	2.6	2.6	2.5	2.1
Cash Ratio	0.9	1.0	1.1	1.2	0.8

Current Ratio

Recommended value moves from 1.5 to 2.5. The company's values were mainly closer or a little above to the higher border of recommended values. This means, that risk of insolvency was low and the company had sufficient liquid instruments to cover its liabilities fallen due. In the ratio is included also stock, which is the least liquid, that is why it is not very suitable to maintain much money in stock.

Quick Ratio

Ideally, this ratio should be 1 - 1.5. The calculated values were much more higher. Quick ratio does not included stock. Compared to current ratio, there is almost no difference. It means that company had not oversize stock, but it had a high volume of current assets in liquid form, which shows lower risk of insolvency, however assets give not high yield.

Cash Ratio

The company's values moved high above recommended values which lie between 0,2 and 0.5. That means the company was able to pay its liabilities fallen due on time. Excess amounts of cash may be viewed as inefficient, because it shows not very good management of company's capital.

3.2.4 Solvency Ratios Analysis

Thanks to solvency ratios, it is possible to calculate the proportion between owners´ and borrowed capital.

Table 11 Solvency Ratio Analysis; Source: Own calculation

	2004	2005	2006	2007	2008
Debt Ratio	28.4%	23.5%	23.5%	24.0%	34.6%
Self-Financing Ratio	71.5%	75.0%	76.5%	75.3%	64.9%
Interest Coverage	23.3	31.9	324.4	-	58.3
Long-Term Insolvency	0.0%	0.0%	0.0%	0.0%	8.4%
Current Insolvency	28.1%	23.1%	23.1%	23.7%	25.9%

Debt Ratio

The debt ratio presents the proportion between owners' equity and total liabilities. The high value of this ratio means high indebtedness of company and the high risk of creditors who prefer the low value of debt ratio. The debt ratio moved around 25% during the period 2004 – 2007. In 2008 increased to the value of almost 35% when borrowed capital thanks to bank loan markedly increased.

Self – Financing Ratio

The sum of debt ratio and self – financing ratio should be equal almost to 100% (other liabilities). The company financed its property from 70% on average by its sources. From the point of using borrowed capital is the company's risk very low. The company should think about financing its activities by higher proportion of borrowed capital, because financing by own capital is more expensive than by borrowed capital.

Interest Coverage

Interest coverage informs about how many times the profit is higher than interest expenses. The recommended minimum value of 3 was fulfilled, the values were even much more times multiplied.

Long – Term and Current Insolvency

The values of long – term borrowed capital were very low, so the values of long – term insolvency were equal almost to zero during the period 2004 - 2007. The most of borrowed capital was made by short – term borrowed capital. That is the reason why the values of current insolvency were almost equal as debt ratio values.

The opposite situation was in 2008, when the long – term insolvency increased to almost 9% because of bank loan taken to build the new workplace in Brno.

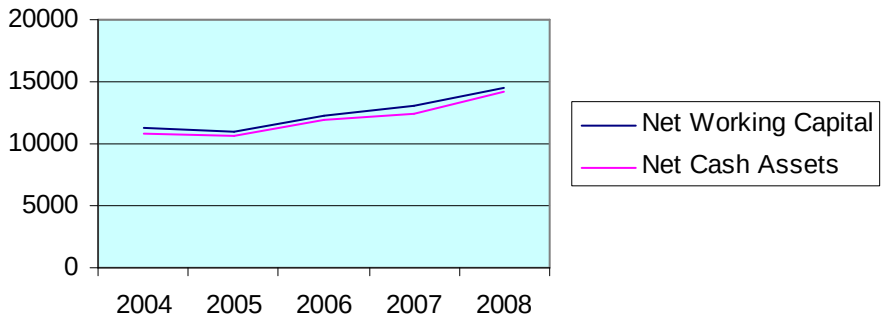
3.3 Differential Ratios Analysis

In the following table 12 are calculated the values of differential ratios of the company during the period 2004 - 2008.

Table 12 Differential Ratios; Source: Own calculation

(In thousands CZK)	2004	2005	2006	2007	2008
Net Working Capital	11,296	10,994	12,251	13,008	14,530
Net Cash Assets	10,797	10,691	11,886	12,339	14,246

Net working capital informs about solvency of the company or if the company is able to pay its liability fallen due on time. High value of net working capital decreases financial risk and tells about financial stability of the company. On the next graph is shown that the value was annually increasing with small exception in 2005. This is evaluated positively from the financial stability point of view.



Graph 7 Differential Ratios Trend
Source: Own processing

Net cash assets had similar trend as net working capital. The value was annually increasing, but with small exception in 2005. To calculate the net cash assets ratio is necessary to cut out less liquid items.

Net quick assets ratio informs about current liquidity of receivables fallen due. It is not calculated because I do not know the value of liability fallen due. If I included all short – term liabilities into the ratio, it would change predicative ability of this ratio.

3.4 Cash Flow Analysis

Cash flow shows real movement of cash during the certain period. There is a time disharmony between costs and expenses and between yields and incomes. Profit/loss is the difference between yields and costs, but not all have to be included.

Table 13 Cash Flow Analysis; Source: Company's material

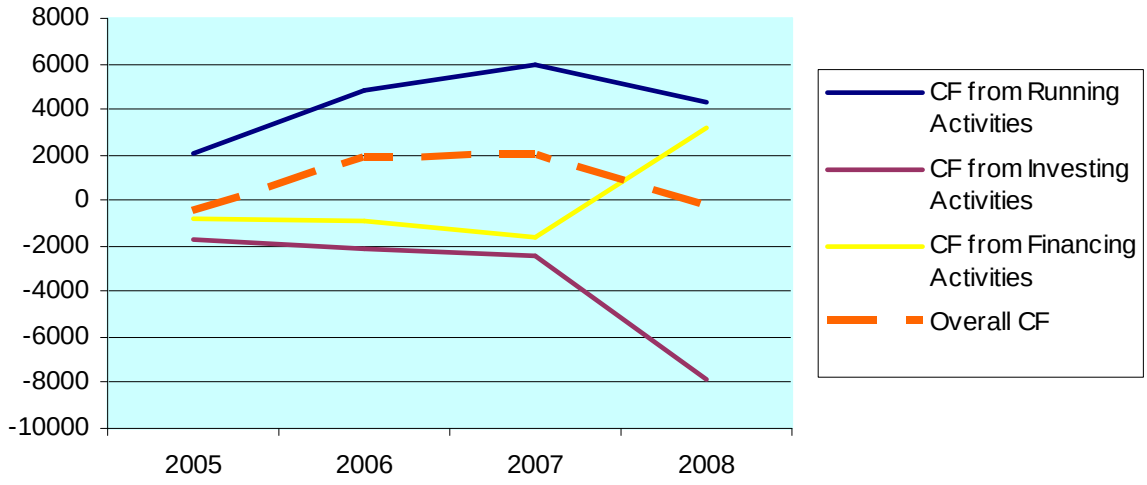
(In thousands CZK)	**2005**	**2006**	**2007**	**2008**
Balance of cash at the beginning of period	6686	6173	8041	10008
Cash flows from running activities				
Profit/loss from running activities	2203	4603	4578	5073
Adjustments by non-cash operations	1677	477	1527	1845
Depreciation of fixed assets	1334	1259	1212	1798
Change in balance of adjustments, reserves	300	-751	379	-19
Profit from sales of fixed assets	-24	-47	-60	-15
Revenue from dividends and shares in profit	0	0	0	0
Accounted for interest expense	67	16	-4	81
Net cash flow from running act. Before work.capital	3880	5080	6105	6918
Change in non-cash items of working capital	-1059	1107	1588	-971
Change in balance of receivables	-78	-856	557	-5327
Change in balance of short-term payables	-1328	2025	1335	3971
Change in balance of inventory	347	-62	-304	385
Change in balance of current liquid assets	0	0	0	0
Net cash flow from running activities before taxation	2821	6187	7693	5947
Interests paid	-69	-18	0	-87
Interests received	2	2	4	6
Income tax for running activities	-712	-1313	-1739	-1565
Income and expense on unusual items	0	0	0	0
Net cash flow from running activities	2042	4858	5958	4301
Cash flows from investing activities				
Expense on fixed assets acquisition	-1811	-2164	-2457	-7864
Income from fixed assets sales	51	47	60	15
Loans to related parties	0	0	0	0
Net cash flow from investing activities	-1760	-2117	-2397	-7849
Cash flows from financing activities				
Change in bal. of long or short-term payables	0	0	5	3800
Impact of changes in equity on cash	-795	-873	-1599	-583
Loss coverage by partners	0	0	0	0
Direct debit fund payments	0	0	0	0
Dividends paid or shares in profit	-795	-873	-1599	-583
Net cash flow from financing activities	-795	-873	-1594	3217
Net increase/decrease in cash on hand	-513	1868	1967	-331
Balance of cash at the end of period	6173	8041	10008	9677

The **net cash values from running activities** were increasing during the period, which can be evaluated positively. In 2008 the value slightly decreased because of receivables increasing. This influenced the value of working capital negatively. It is a typical demonstration of the beginning of financial crisis. Net cash flow from running activities includes cash flows, which come from basic company's activities. It shows if the company is able to create cash flows from usual business transaction. The value should be positive and the company should constantly increase net cash flow from running activities.

The **net cash values from investing activities** were gradually increasing and in 2008 reached almost 8 mil. CZK. The biggest investment in 2008 was building of the new workplace in Brno of total value of 8 mil. CZK.

The **net cash values from financing activities** are mainly influenced by dividends paid or shares in profit during the period. In 2008 the company took a long – term loan of 3.8 mil. CZK what influenced the cash flow values from financing activity heavily.

The **overall value of net cash flow** is a summary of foregoing three cash flows. The overall values were considerably fluctuating. In 2005 and 2008 were negative and in 2006 and 2007 were shown positive values. The negative value in 2005 is given mainly by increasing of short – term payables. This trend was broken during next years and the values of net cash flow were positive with exception in 2008 when the value decreased and was negative thanks to high investment into fixed assets.



Graph 8 Cash Flow Trend
Source: Own processing

3.5 System of Ratios

The last part of analysis of the company's financial situation refers to chosen models of total evaluation of financial level, Altman Z-score, Index IN05 and Quick test.

The following table contains item "grey zone" as well. If the values flow in this zone, the company is not threaten to a bankruptcy. It is threaten, if the values are under the border. The values higher than upper border show good company´s financial situation.

Table 14 System of Ratios; Source: Own calculation

Ratio	"Grey Zone"	2004	2005	2006	2007	2008
Altman Z - Score	1.20 – 2.90	2.93	3.18	3.20	2.84	2.32
Index IN05	0.9 – 1.6	2.32	2.75	14.83	1.59	3.60

The Altman Z - score values were higher than upper border of grey zone till 2006, it means that the company´s financial situation was good. The values from two last years lie in the interval, it is not so bad, but the company is not so strong as it used to be.

According to the index IN05 the values were with exception of 2007 much more higher than the upper border of grey zone. The company was prosperity and created value. In 2006 was the value extremely bigger than in other years. It was caused by higher earnings before interest and taxes and by lower interest expenses that year.

Table 15 Quick Test; Source: Own calculation

Ratio	2004	2005	2006	2007	2008
Self-Financing Ratio	71%	75%	76%	75%	65%
Evaluation	1	1	1	1	1
CF Pay-off	0,4	-0,2	-0,1	-0,3	0,2
Evaluation	1	1	1	1	1
Evaluation of Fin. Stab.	1	1	1	1	1
CF in % from Sales	-3,6%	4,2%	9,9%	12,7%	7,9%
Evaluation	-	4	2	1	3
ROA	6,9%	5,8%	13,9%	9,7%	8,8%
Evaluation	4	4	2	3	3
Evaluaion of Yield Sit.	4	4	2	2	3
Overall Evaluation	**2,5**	**2,5**	**1,5**	**1,5**	**2**

From the results of this indicator the company is clasified as very good. Financial situation of the company was excellent, but yield situation was a bit more worse, that was why the overall evaluation of the company moves around mark 2.

4 PROPOSED SOLUTION AND ITS CONTRIBUTION

At the beginning of the last chapter I would like to repeat and summarize the results of financial analysis done in the company needed for recommendation and proposed solution, which follow this summary.

4.1 Summary of Financial Analysis Results

Financial analysis of the financial situation was done on basis of the accounting statements from the period 2004 – 2008. From the overall point of view the business activity of the company seems to be successful. In some areas of financial analysis were reached very good results, some results were average or weak.

The following part is divided into single areas of business management, which are evaluated and alerted their weaknesses.

4.1.1 Evaluation of Assets and Liabilities Trend

Total assets featured by growth. The biggest change of 31% of total assets was in 2008 thanks to increasing of long - term tangible assets, when the construction of a new workplace for department in Brno started. Around 60% of assets were current assets. From closer point of view, the main part of current assets (30-37%) were made by short – term receivables.

Concerning activity ratios, total assets turnover ratios were lower than recommended interval. The period of receivables turnover varied from 70 to 97 days. The time of receivables due date was from 14 to 90 days, it means that subscribers paid late. On the other side, payables turnover period values were very low. The company paid its liabilities earlier that it is common. The company can suffer insolvency and should deal with suppliers for a longer term of expiration.

The company was financed by owners' equity from almost 70%, and according to the gold rule of risk equilibration owners'equity was higher than borrowed capital. The company took 5,000,000 CZK on credit to build a new workplace in Brno in 2008.

4.1.2 Evaluation of Income Statement Trend

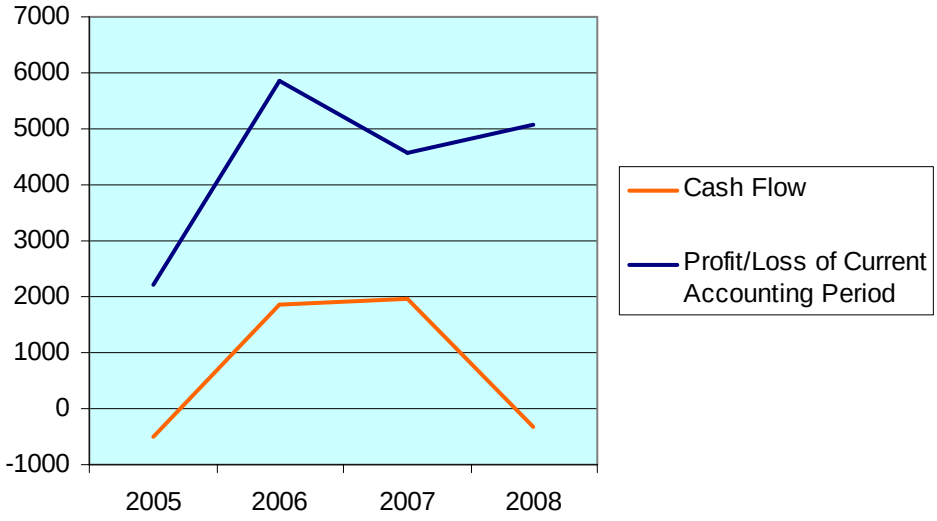
The company had no revenues from sold goods, the main source were revenues from own products and services, which had increasing tendency during the period with exception in 2007 when the production decreased but not the added value. The positive fact is, that the production was increasing faster than production consumption with exception in 2008. Operating profit had floating tendency. In 2008 was almost twice bigger than in 2004. Costs were made mainly by personnel expenses (around 70%), the second biggest part of cost were services (20%).

4.1.3 Evaluation of Cash Flow Trend

The cash flow values featured by increase at the beginning and during the period, but in 2008, the cash flow got into negative values, when the value decreased thanks to high investment into fixed assets.

The following graph shows comparison of profit of current accounting period with overall cash flow during the period 2005 – 2008.

It is obvious that in the last year the company's trend of cash flow had a different tendency than profit from accounting period. It was thanks to the high expenses on fixed assets acquisition.

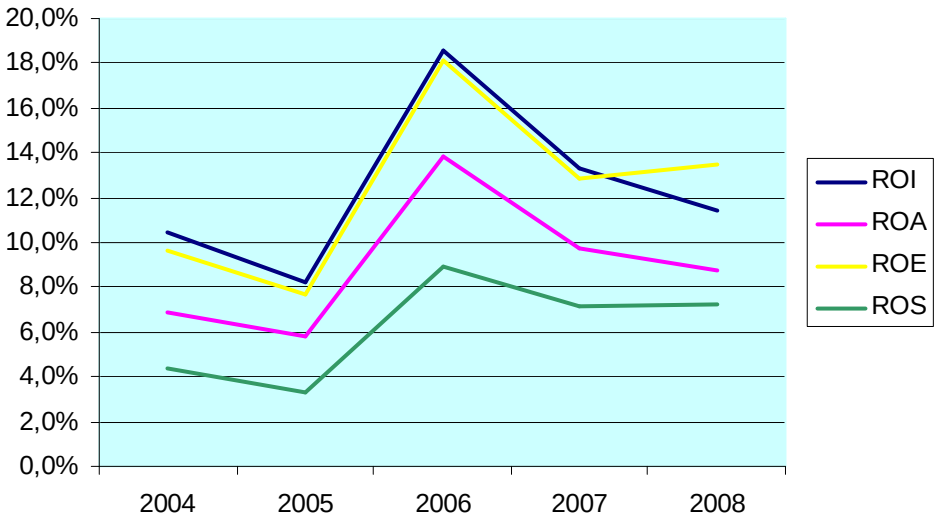


Graph 9 CF and Profit Trend
Source: Own processing

4.1.4 Evaluation of Liquidity and Profitability

All liquidity ratios were mainly inside or above the recommended interval. Risk of insolvency was low and the company had sufficient liquid instruments to cover its liabilities fallen due. Compared to quick ratio, there was almost no difference. It means that company had not oversize stock, but it had a high volume of current assets in liquid form, which shows lower risk of insolvency, however assets give not high yield. The company was able to pay its liabilities fallen due on time. But excess amounts of cash can be inefficient for the company.

From the point of profitability, the company was not such successful at the beginning of the period. The first two years the values were under the recommended standard. But in 2006 this trend changed and the values were much more higher than recommended values. The following two years values gradually decreased to their standard. The worst trend showed return on sales ratio. The low values signal either relatively low prices or too high costs.



Graph 10 Profitability Ratio Trend
Source: Own processing

4.2 Proposed Solution and Recommendation

On the basis of done financial analysis of the company VD – TBD a. s., which records not only the trend of management of the company, but it enables to find out causes of decline or improvement of the financial situation as well. It finds out areas, where is necessary the focus of the company and propose measurement to their improvement and ensure the next development of business activity.

The financial situation of analysed company is good, no bigger problems were found, which would threaten the company seriously. Especially the year 2006 was full of improvement of financial results for the company.

It is obvious, that the company VD – TBD a. s. is a strong and stabile company, which has solid bases for its business activity and there are no financial problems leading to a bankruptcy in the near future.

Despite of the good situation of the company and previous facts, I suppose the improvement for the following areas:

- Financing
- Assets
- Receivables
- Opportunities and Threads
- Employees

Financing Arrangements

From done financial analysis ensued, that the results are good, some of them are even higher that recommended values. For example solvency ratios show that the financing of the company is from 70% by its sources. The trend has decreasing tendency for now, it means that the company is less and less financed by its sources. But if the total insolvency would decrease in the next years, it means that the proportion of borrowed capital would decrease, the company would decrease rentability of its capital through the financial leverage, what is not suitable.

The company should think about financing its activities by higher proportion of borrowed capital, because financing by own capital, as it is known, is more expensive than by borrowed capital. The company should take this fact on mind during the next decision – making.

Assets Arrangements

Concerning efficiency ratios, which evaluate how effectively the company uses its assets, total assets turnover ratios are lower than recommended interval. It is necessary to examine possibilities of effective decreasing of total assets. Sales should be increase or some of assets should be sold. Lower values of fixed assets ratio due to investment into long – term property signal that it is necessary to increase production or to shorten investments. The higher are the values of the ratio, the higher is the efficiency of using company's property.

According to liquidity ratios, especially the quick ratio shows that the company has not oversize stock, but it has a high volume of current assets in liquid form, which shows lower risk of insolvency, however assets give not high yield. Cash ratio shows that the company is able to pay its liabilities fallen due on time. Excess amounts of cash may be viewed as inefficient, because it shows not very good management of company's capital. The company should think about better and effective investing of its money.

Return on investments had during the period very low values with exception in 2006. It is desirable to have higher values and growing tendency of this ratio. Return on sales values were also not so high during the period with exception in 2006 again. It signals relatively low prices or too high costs.

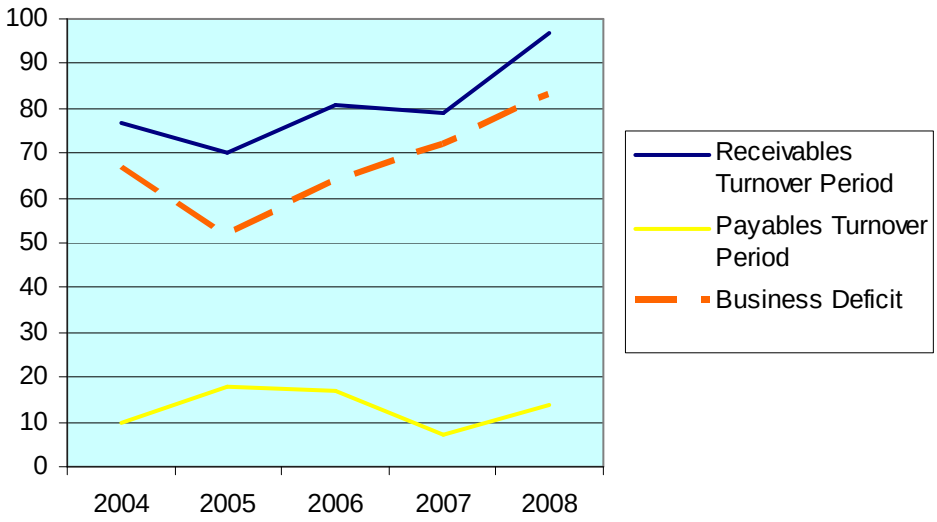
Price increasing is a sensitive topic during the recent time. The advantage of the company is that it is authorised by Ministry and it is the only one company entrusted to do technical and safety supervision. I think that price increasing is possible, but it depends on management, on their experience and relationships with customers. The other possibility was that costs were too high. Costs were made mainly by personnel expenses (around 70%), the second biggest part of cost were services (20%). After the consultation with manager, even though the personnel expenses are high especially thanks to wages and salaries, they correspond to the level of experience and knowledge of employees.

Management of Receivables

From the activity analysis came some drawbacks in the field of management of receivables. Receivables from business relation increased annually. The time of receivables in the company varied from 14 to 90 days according to the customer and contract, but from the analysis ensued that the company's period of receivables cash - ins varied from 70 to 97 days. The company should attempt to decrease this period to have money as soon as possible available to use. The company should observe this period and avoid to the next potential increasing.

The higher time to pay receivables is given to the bigger customers for bigger contracts, especially contracts with watersheds, the time is up to 90 days. There are no problems with paying receivables late. Some problems are with medium or small customers, who have approximately 30 days to pay receivables to the company. The company should focus on these problematic customers, even though the amount of receivable is not so high compared with contracts with watersheds.

The company had really significant business deficit. The main reason was in imbalabce between mature of liabilities and receivables detrimental the company. The biggest cutomers demand a long time to pay off their liabilities (ussually 2 – 3 months). The business deficit is the difference between receivables and paybles turnover period.



Graph 11 Business Deficit
Source: Own processing

The business deficit moved from 52 to 83 days, what is for the company not suitable. This deficit can cause significant decreases of cash flow during the year. The values were so high because the biggest customers, mainly state enterprises, demand 3 months for invoices payment.

Table 16 Business Deficit; Source: Own calculation

Ratio	**2004**	**2005**	**2006**	**2007**	**2008**
Receivables Turnover Period	77	70	81	79	97
Payables Turnover Period	10	18	17	7	14
Business Deficit	67	52	64	72	83

In 2008 the total sales increased for 17%, but the receivables from business relations increased for 42%. Because of recent financial crisis, it is possible to assume, that customers will lengthen out the term of expiration in the near future and there is a risk as well, that customers will be not able or they will not have the will to pay the receivables. In that case, the company could suffer insolvency.

This problem could be solved with higher interest of the person who works on the project. Because he is often the only person who gets in touch with the customer. He can thanks to friendly relationship with customer deal about paying the receivables on time.

The preventive solution of non-payment of receivables could be setting suitable selling condition or the decision to whom give the business credit and for how long, or what sanction are in the case of non-fulfilment of a contract. Because the business credit has no interest and it freezes money for the company and money are not available to use.

There are different arrangements that the company can use to quicker the period of receivables cash-ins. For example shorten of length of business credit. But to afford the business credit is considered as a competitive advantage and its shortage could have maybe the negative influence.

The next solution of reducing the risk of non-payment of receivables could be setting of the credit limit, which the company is willing to offer. This is suitable especially when the contract is big.

Factoring could be the another arrangement to solve this problem. There are two forms of factoring. Regression factoring, when the factoring company has the right of the back transfer in case of non-payment of the receivables. Or non-regression factoring, when the factor assumes the risk of non-payment of the receivables.

Opportunities and Threads for the Company

The authorization to do technical and safety supervision given by Ministry of Agriculture is the main strength of the company, it creates a big barrier for new entrants, but on the other hand, the possibility of its loss is the main threat. The company should find the way how to deal with loss of the authorization, to find other possibilities of working in the field of water structures or to gain more contracts from foreign countries. In the case of given the authorisation to another company as well, learn how to fight with competition.

Motivation of Employees

As mentioned earlier, among strong side of the company belongs loyalty of employees and concerning low fluctuation of them. The company should struggles for maintaining of key employees as a essential. Especially qualified employees with long - time experience and knowledge are for the company indispensable. The loss of these employees and their possible working for another company would mean the loss of works contracts.

The company could use the situation of financial crisis to its own advantage. It could employ workers, who were redundant or their wage was reduced in consequence of the financial crisis. It could be a financial burden for the company at this moment, but the right choose of employee could be very valuable in the future. During the crisis and high unemployment is higher offer of qualified workers. New employee could beside his experience bring new customers to the company as well.

4.3 Evaluation of Contribution of Proposed Solution

Above mentioned arrangements concern areas, where were found weaknesses or deficiencies on basis of the financial analysis done in the company VD - TBD a. s. I believe, that proposed solution and recommendation contribute to the improvement of the financial situation in the analysed company.

Even though the financial situation of the company is good, it is necessary to pay attention to management of receivables. Proposed solution leading to shorten the time of receivables cash-ins and their overall management will in case of implementation have positive influence on overall financial situation of the company. The quicker time of receivables cash-ins of the company will decrease the risk of non-payment of receivables and the company will have to use money to invest for instance to growth of the company, to quicker the turnover or to valuation of suitable financial product.

Qualified, hardworking and satisfied employee is for the company probably the most valuable and the most important. Employees are those, who create by their work activity value of the company. They are a huge contribution for the company. Gaining of next qualified and hardworking employee will be a big contribution for the company. It will influence increasing of the activities and overall management of the company.

CONCLUSION

The point of financial analysis is, that it gives information on base of evaluation and comparison of previous data necessary to use in next decision-making. The aim of financial analysis is to evaluate the financial health of the company, detect eventual weaknesses, which could lead to financial problems. Financial analysis gives an overview of company's management, its quality or flow of capital.

The essence of this master's thesis was the evaluation of the financial situation of the company VD-TBD a. s on basis of the financial statements from the period 2004 –2008. Porter's analysis, SWOT analysis and a complex financial analysis of the company focused on the analysis of items from balance sheet, income statement and cash flow statement, proportion, differential and system of ratios analyses were done.

VODNÍ DÍLA-TBD a. s. is an engineering and consulting company, which provides technical and safety supervision over waterworks in the Czech Republic. The company monitors and evaluates the technical conditions of waterworks, emphasizing safety and reliability, and eliminates possible failures and their consequences. It has no connection to production, operation nor supplier enterprises. Its employees are highly specialized and loyal to the company.

The overall management of the company seems to be good. The year 2006 reached record values in management of the company. In some areas the company reached very good results, other were average, some of them, like management of receivables were weak.

The aim of the master's thesis was on basis of done financial analysis propose arrangement leading to reducing or elimination of founded weaknesses. It was alerted to problem areas and arrangements leading to its improvement were proposed. This should lead to improvement of overall financial situation.

I believe that this master's thesis will be for the company's management contribution in the financial and other field. Information coming from done analyses can be for the company inspiration and can serve for future decision – making for the company's management.

REFERENCES

1 ALEXANDER, C. Market models: a guide to financial data analysis. Chichester: John Wiley & Sons, 2001. 494 s. ISBN 0-471-89975-5.

2 BERNSTEIN, L. A. Analysis of financial statements. New York: McGraw-Hill, 2000. 784 s. ISBN 0-07-094504-7.

3 FRIDSON, M. Financial statement analysis: a practitioner's guide. New York: John Wiley & Sons, 2002. 396 s. ISBN 0-471-40915-4.

4 FRIEND, G. *Guide to Business Planning*. London: Profile Books Limited, 2004. 281 s. ISBN 1-861-97474-4.

5 GILL, J. O. *Financial Basics Of Small Business Success*. New York: Crisp Learning, 1993. 235 s. ISBN 1-560-52167-8.

6 HELFERT, E. A. *Techniques of Financial Analysis*. New York: McGraw-Hill, 2002. 570 s. ISBN 8-172-24067-8.

7 KISLINGEROVÁ, E. and HNILICA, J. *Finanční analýza: krok za krokem*. Praha: C.H. Beck, 2005. 137 s. ISBN 8-071-79321-3.

8 KONEČNÝ, M. *Finanční analýza a plánování*. Brno: Zdeněk Novotný, 2006. 83 s. ISBN 80-7355-061-X.

9 PORTER, M. E. *Competitive Advantage.* New York: Free Press, 2004. 557 s. ISBN 0-743-26087-2.

10 PROCTOR, O. S. *Building financial models with Microsoft Excel a guide for business professionals*. Hoboken, NJ: Wiley, 2004. 347 s. ISBN 0-471-66103-1.

11 RIAHI-BELKAOUI, A. *Financial Analysis and the Predictability of Important Economic Events*. Westport: Greenwood Publishing Group, Incorporated, 1998. 219 s. ISBN 1-567-20164-4.

12 SEDLÁČEK, J. *Účetní data v rukou manažera*. Brno: Computer Press, 2001. 212 s. ISBN 80-7226-562-8.

13 TEMTE, A. *Financial Statement Analysis*. Chicago: Dearborn Trade, A Kaplan Professional Company, 2005. 683 s. ISBN 1-419-52897-1.

14 THOMSETT, M. C. *Annual Reports 101: What the Numbers and the Fine Print Can Reveal about the True Health of a Company*. New York: American Management Association, 2007. 242 s. ISBN 0-814-47367-9.

15 VANCE, D. *Financial Analysis & Decision Making: Tools and Techniques to Solve Financial Problems and Make Effective Business Decisions*. New York: McGraw-Hill, 2002. 411 s. 0-071-40665-4.

16 WHITE, G. I. *The analysis and use of financial statements*. Hoboken: John Wiley & Sons, 2003. 767 s. ISBN 0-471-37594-2.

Other sources:

17 CTK, *The worst is probably over for Czech economy*. [online], available from: http://www.financninoviny.cz/financni-krize/analyzy/zpravy/analytici-ceska-ekonomika-ma-zrejme-nejhorsi-za-sebou/385280?id=385301, [citation from 13.7.2009]

18 PAZOUREK, V. *Potopená loď*. [online], available from http://foto.mapy.cz/88814-Potopena-lod, [10.7.2009]

19 PAZOUREK, V. *Brněnská přehrada*. [online], available from http://foto.mapy.cz/11833-Brnenska-prehrada, [10.7.2009]

20 VODNÍ DÍLA–TBD a.s. *Výroční zpráva*. 2004, 2005, 2006, 2007, 2008.

LIST OF TABLES

LIST OF GRAPHS

LIST OF FIGURES

LIST OF APPENDICES

Appendix 1

Appendix 1 Balance Sheet (assets) VD -TBD a. s. 2004 – 2008

(In thousands CZK)	**2004**	**2005**	**2006**	**2007**	**2008**
TOTAL ASSETS	27779	27533	31577	34394	45057
Receivables from subscriptions	0	0	0	0	0
Fixed assets	10349	10799	11787	13076	19290
Intangible fixed assets	40	193	1159	2101	1508
Incorporation expenses	0	0	0	0	0
Research and development	0	0	0	0	0
Software	0	51	31	795	1418
Valuable rights	0	0	0	0	0
Goodwill (+/-)	0	0	0	0	0
Other intangible fixed assets	0	0	0	0	0
Intangible fixed assets under construction	40	142	1128	1306	90
Advance payments for int. fixed assets	0	0	0	0	0
Tangible fixed assets	10309	10606	10628	10975	17782
Lands	1444	1444	1444	1949	1949
Constructions	7171	7519	7865	7551	7025
Equipment	1468	1496	1010	1191	1555
Perennial corps	0	0	0	0	0
Breeding and draught animals	0	0	0	0	0
Other tangible fixed assets	0	0	0	0	0
Tangible fixed assets under construction	123	69	257	258	7191
Advance payments for tang. fixed assets	0	0	0	0	62
Adjustment to acquired assets	103	78	52	26	0
Long-term financial assets	0	0	0	0	0
Shares in controlled and managed organ.	0	0	0	0	0
Shares in acc. units with subst. influence	0	0	0	0	0
Other securities and shares	0	0	0	0	0
Loans to controlled and managed organ.	0	0	0	0	0
Other financial investments	0	0	0	0	0
Financial investments acquired	0	0	0	0	0
Advance payments for long-term fin. ass.	0	0	0	0	0
Current assets	17343	16614	19559	21155	25008
Inventory	499	303	365	669	284
Materials	243	249	269	251	242
Work in progress and semi-products	256	54	96	418	42
Finished products	0	0	0	0	0
Animals	0	0	0	0	0
Merchandise	0	0	0	0	0
Advance payments for inventory	0	0	0	0	0
Long-term receivables	0	0	0	0	0
Trade receivables	0	0	0	0	0
Rec.from controlled and managed organ.	0	0	0	0	0
Rec.from acc. units with substantial infl.	0	0	0	0	0
Rec.from partners, cooperative members	0	0	0	0	0
Estimated receivable	0	0	0	0	0
Other receivables	0	0	0	0	0
Deferred tax receivable	0	0	0	0	0

Short-term receivables	10158	10138	11153	10478	15047
Trade receivables	9339	9328	10960	10177	14491
Rec.from controlled and managed organ.	0	0	0	0	0
Rec.from acc.units with substantial infl.	0	0	0	0	0
Rec.from partners, cooperative members	0	0	0	0	0
Rec.from soc. security and health insur.	0	0	0	0	0
Due from state - tax receivable	446	576	0	0	194
Short-term deposits given	110	85	193	91	113
Estimated receivable	250	149	0	210	254
Other receivables	13	0	0	0	-5
Short-term financial assets	6686	6173	8041	10008	9677
Cash	24	25	99	120	89
Bank accounts	6662	6148	7942	9888	9588
Short-term sec. and ownership interests	0	0	0	0	0
Short-term financial assets acquired	0	0	0	0	0
Accruals	87	120	231	163	759
Deferred expenses	87	120	22	163	739
Complex deferred costs	0	0	0	0	0
Deferred income	0	0	209	0	20

Appendix 2

Appendix 2 Balance Sheet (liabilities and capital) VD-TBD a. s. 2004 – 2008

(In thousands CZK)	2004	2005	2006	2007	2008
TOTAL LIABILITIES	27779	27533	31577	34394	45057
Equity	19852	20647	24151	25887	29252
Registered capital	10600	10600	10600	10600	10600
Registered capital	10600	10600	10600	10600	10600
Company's own shares and interests (-)	0	0	0	0	0
Changes of registered capital (+/-)	0	0	0	0	0
Capital funds	16	16	16	16	16
Share premium	0	0	0	0	0
Other capital funds	16	16	16	16	16
Dif.from revaluation of assets and liab.	0	0	0	0	0
Differences from revaluation in transform.	0	0	0	0	0
Reserve funds, statutory reserve account	1220	1320	1400	1619	1787
Legal reserve fund / indivisible fund	1220	1320	1400	1619	1787
Statutory and other funds	0	0	0	0	0
Profit / loss - previous year	6109	7121	7758	10317	12901
Retained earnings from previous years	6109	7121	7758	10317	12901
Accumulated losses from previous years	0	0	0	0	0
Profit / loss - current year (+/-)	1907	1590	4377	3335	3948
Other sources	7878	6482	7426	8270	15573
Reserves	0	0	0	0	0
Res. under special statutory regulations	0	0	0	0	0
Res. for pension and similar payables	0	0	0	0	0
Income tax reserves	0	0	0	0	0
Other reserves	0	0	0	0	0
Long-term payables	81	112	118	123	95
Trade payables	0	0	0	0	0
Pay. to controlled and managed organ.	0	0	0	0	0
Pay. to acc. units with substant.influence	0	0	0	0	0
Pay. from partners, cooperative members	0	0	0	0	0
Long-term advances received	0	0	0	0	0
Issues bonds	0	0	0	0	0
Long-term notes payables	0	0	0	0	0
Estimated payables	0	0	0	0	0
Other payables	0	0	0	0	0
Deferred tax liability	81	112	118	123	95
Short-term payables	81	5620	7308	8147	10478
Trade payables	6047	2398	2247	963	2112
Pay. to controlled and managed organ.	1198	0	0	0	0
Pay. to acc. units with substant. influence	0	0	0	0	0
Pay. from partners, cooperative members	0	75	0	0	0
Payroll	47	1084	1165	2317	3231
Pay. to social securities and health insur.	1563	670	703	1409	2011
Due from state - tax liab. and subsidies	990	1194	2401	2865	2440
Short-term deposits received	1867	114	609	416	567
Issues bonds	139	0	0	0	0
Estimated payables	0	85	183	136	99

Other payables	191	0	0	41	18
Bank loans and fin. accommodations	52	750	0	0	5000
Long-term bank loans	1750	0	0	0	3800
Short-term bank loans	0	750	0	0	1200
Short-term accommodations	1750	0	0	0	0
Accruals	0	404	0	237	232
Accrued expenses	49	47	0	0	58
Deferred revenues	49	357	0	237	174

Appendix 3

Appendix 3 Income Statement VD-TBD a. s. 2004 – 2008

(In thousand CZK)	2004	2005	2006	2007	2008
Revenues from sold goods	11	0	0	0	0
Expenses on sold goods	11	0	0	0	0
Sale margin	0	0	0	0	0
Production	43810	47867	48735	46918	53442
Rev. from own products and services	43601	48017	48643	46529	53760
Change in inventory of own products	209	-202	42	323	-377
Capitalisation	0	52	50	66	59
Production consumption	13268	13631	13180	10055	12007
Consumption of material and energy	2122	2834	1879	1630	2203
Services	11146	10797	11301	8425	9804
Added value	30542	34236	35555	36863	41435
Personnel expenses	25895	30319	28421	30873	34208
Wages and salaries	18095	21303	19912	21664	24035
Remuneration of board members	0	0	144	246	246
Social security expens. and health insur.	6256	7359	6904	7438	8382
Other social expenses	1544	1657	1461	1525	1545
Taxes and fees	56	68	61	51	56
Depreciations of intang. and tang. assets	1339	1308	1150	1142	1624
Rev. from disposals of fixed assets, mat.	77	78	47	101	27
Revenues from disposals of fixed assets	60	51	44	60	15
Revenues from disposals of materials	17	27	3	41	12
Net book value of disposed fix.ass.,mat.	39	27	0	0	0
Net book value of sold fixed assets	39	27	0	0	0
Net book value of sold material	0	0	0	0	0
Change in operating reserves and adjustments and complex deferred costs	-1251	-27	-217	74	611
Other operating revenues	178	0	152	164	901
Other operating expenses	1719	173	355	365	652
Transfer of operating revenues	0		0	0	0
Transfer of operating expenses	0		0	0	0
Operating Profit / Loss	3000	2446	5984	4623	5212
Revenues from sales of securities	0	0	0	0	0
Sold securities and ownership interests	0	0	0	0	0
Revenues from long-term financial assets	0	0	0	0	0
Revenues from shares	0	0	0	0	0
Revenues from others securities	0	0	0	0	0
Rev. from other long-term fin. assets	0	0	0	0	48547
Rev. from short-term financial assets	0	0	0	0	0
Expenses associated with fin. assets	0	0	0	0	0
Rev. from reval. of securities and derivat.	0	0	0	0	0
Cost of reval. of securities, derivatives	0	0	0	0	20
Change in fin. reserves and adjustments	0	0	0	0	1

Interest revenues	24	2	2	4	6
Interest expenses	119	69	18	0	87
Other financial revenues	0	123	98	0	2
Other financial expenses	47	299	226	49	60
Transfer of financial revenues	0	0	0	0	0
Transfer of financial expenses	0	0	0	0	0
Profit/loss from financial operations	-142	-243	-144	-45	-139
Income tax on ordinary income	865	613	1463	1243	1125
Due tax	889	582	1457	1238	1154
Tax deferred	-24	31	6	5	-29
Operating Profit / Loss Ordinary Activity	1993	1590	4377	3335	3948
Extraordinary revenues	0	0	0	0	0
Extraordinary expenses	86	0	0	0	0
Income tax on extraordinary income	0	0	0	0	0
Due tax	0	0	0	0	0
Tax deferred	0	0	0	0	0
Operating profit/loss extraordinary activity	-86	0	0	0	0
Transfer profit (loss) to partners	0	0	0	0	0
Profit/Loss of Current Accounting Period	1907	1590	4377	3335	3948
Profit/loss before tax	2772	2203	5840	4578	5073

Appendix 4

Appendix 4 Cash Flow Statement VD-TBD a. s. 2004 – 2008

(In thousands CZK)	**2004**	**2005**	**2006**	**2007**	**2008**
Balance of cash at the begin. of period	11678	6686	6173	8041	10008
Cash flows from running activities					
Acc. profit/loss from running.act.bef. tax.	2858	2203	4603	4578	5073
Adjustments by non-cash operations	1223	1677	477	1527	1845
Depreciation of fixed assets and	2706	1334	1259	1212	1798
Change in balance of adjustments, reserv.	-1557	300	-751	379	-19
Profit from sales of fixed assets	-21	-24	-47	-60	-15
Rev. from dividends and shares in profit	0	0	0	0	0
Accounted for interest expense	95	67	16	-4	81
Net CF from run.act.bef. tax., work.cap.	4081	3880	5080	6105	6918
Change in non-cash items of work.capital	-3750	-1059	1107	1588	-971
Change in balance of rec.from run.act.	-1131	-78	-856	557	-5327
Change in balance of short-term payables	-2403	-1328	2025	1335	3971
Change in balance of inventory	-216	347	-62	-304	385
Change in balance of current liquid ass.	0	0	0	0	0
Net CF from r.act.bef.tax.,extraord.items	331	2821	6187	7693	5947
Interests paid excl. of interest capitaliz.	-119	-69	-18	0	-87
Interests received	24	2	2	4	6
Income tax for running activities	-1723	-712	-1313	-1739	-1565
Inc.and exp.on extra.items, incl.inc.tax	-86	0	0	0	0
Net cash flow from running activities	-1573	2042	4858	5958	4301
Cash flows from investing activities					
Expense on fixed assets acquisition	-2153	-1811	-2164	-2457	-7864
Income from fixed assets sales	60	51	47	60	15
Loans to related parties	0	0	0	0	0
Net cash flow from investing activities	-2093	-1760	-2117	-2397	-7849
Cash flows from financing activities					
Change in balance of payables	0	0	0	5	3800
Impact of changes in equity on cash	-1326	-795	-873	-1599	-583
Increase in cash on hand	0	0	0	0	0
Payment of share in equity to partners	0	0	0	0	0
Other contrib.of cash by partners	0	0	0	0	0
Loss coverage by partners	0	0	0	0	0
Direct debit fund payments	0	0	0	0	0
Dividends paid,shares in profit, incl. tax.	-1326	-795	-873	-1599	-583
Net cash flow from financing activities	-1326	-795	-873	-1594	3217
Net increase/decrease in cash on hand	-4992	-513	1868	1967	-331
Balance of cash at the end of period	6686	6173	8041	10008	9677